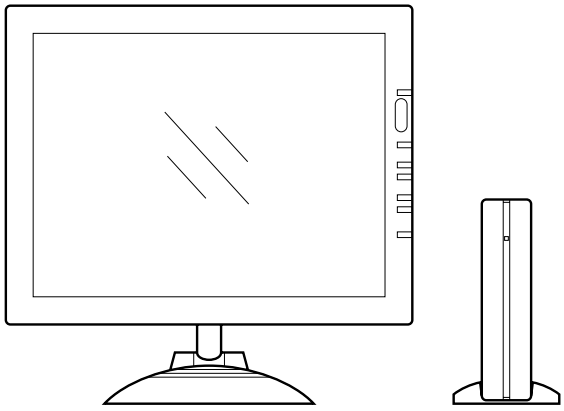
SDM-N50

SERVICE MANUAL

US Model
Canadian Model
AEP Model

Chassis No. SCC-L32A-A



ST5 CHASSIS

SPECIFICATIONS

LCD panel	Panel type: a-Si TFT Active Matrix Picture size: 15 inch (38 cm)
Input signal format	RGB operating frequency* Horizontal: 30 – 61 kHz Vertical: 50 – 85 Hz
Resolution	Horizontal: Max.1024 dots Vertical: Max.768 lines
Input signal levels	RGB video signal 0.700 Vp-p, 75 Ω, positive SYNC signal TTL level, 2 kΩ, positive or negative (Separate horizontal and vertical, or composite sync) 0.3 Vp-p, 75Ω, negative (Sync on green)
Audio output	2W × 2
Headphones jack	Stereo minijack Accepts impedance of 16 – 48Ω
AUDIO IN jack	Stereo minijack Accepts impedance of 16 kΩ Accepts level 0.5 Vrms
Power requirements	100 – 240 V, 50 – 60 Hz, 0.55 – 0.3 A
Power consumption	Max. 35 W
Operating temperature	5 – 35 ˚C
Dimensions (width/height/depth)	Display (upright): Approx. 356 × 347 × 185 mm (14 1/8 × 13 3/4 × 7 3/8 inches) Media engine (without stand): Approx. 45 × 180 × 180 mm (1 13/16 × 7 1/8 × 7 1/8 inches) Media engine (with stand): Approx. 94 × 185 × 180 mm (3 3/4 × 7 3/8 × 7 1/8 inches)
Mass	Display: Approx. 2.7 kg (5 lb 15 oz) Media engine (with stand): Approx. 0.85 kg (1 lb 14 oz)
Plug & Play	DDC1/DDC2B/DDC2Bi
Accessories	• LCD display • Media engine • Media engine stand • Power cord • System connecting cable (2 m) (applicable cable type: DP-2) • HD15 (RGB) video signal cable • Audio cord (stereo miniplug) • Macintosh adapter • Windows Monitor Information Disk/ Utility Disk • Macintosh Utility Disk • Warranty card • Notes for Macintosh users • This instruction manual

Recommended horizontal and vertical timing condition

- Horizontal sync width duty should be more than 4.8% of total horizontal time or 0.8 µs, whichever is larger.
- Horizontal blanking width should be more than 2.3 µsec.
- Vertical blanking width should be more than 450 µsec.

Design and specifications are subject to change without notice.

TFT LCD COLOR COMPUTER DISPLAY

SONY®

MICROFILM

DIAGNOSIS

	Factorical preservation register	LED	LED indicates
Display part trouble	SHUTDOWN_LOG1 bit4 (16)	Part of the body only	Red (0.5 sec) and Off (0.5 sec)
Backlight trouble	SHUTDOWN_LOG1 bit2 (4)	Parts of the body and the display	Amber (0.5 sec) and Off (1.5 sec)
Body temperature trouble	SHUTDOWN_LOG1 bit3 (8)	Parts of the body and the display	Amber (1.0 sec) and Off (1.0 sec)
5V voltage anomalous	SHUTDOWN_LOG1 bit5 (32)	Parts of the body and the display	Amber (1.5 sec) and Off (0.5 sec)
3.3V voltage anomalous	SHUTDOWN_LOG1 bit6 (64)	Parts of the body and the display	Amber (1.5 sec) and Off (0.5 sec)

*Aging mode ..... No input signal and press CONT key for longer than 2 second.

Power saving function (user sensor/power saving mode)

This monitor meets the power-saving guidelines set by VESA, ENERGY STAR, and NUTEK. If the monitor is connected to a computer or video graphics board that is DPMS (Display Power Management Signaling) compliant, the monitor will automatically enter the power saving mode. It automatically enters the low power consumption mode when the user sensor detects the absence of a user.

Power consumption state	Power consumption	AC power indicator	⏻ (power) indicator
normal operation	35 W	green	green
1 low power consumption mode	≤ 4 W	green	green and orange alternate
2 power saving mode	≤ 3 W	orange	orange
⏻ (power): off	≤ 3 W	red	off
AC power: off	0 W	off	off

TIMING SPECIFICATION

PRIMARY MODE MODE AT PRODUCTION	MODE 0	MODE 1	MODE 2	MODE 3	MODE 4	MODE 5	MODE 6	MODE 7
RESOLUTION	640 X 480	640 X 480	640 X 480	640 X 480	720 X 400	720 X 400	720 X 480	720 X 480
CLOCK	25.175 MHz	30.240 MHz	31.500 MHz	36.000 MHz	28.350 MHz	35.500 MHz	35.573 MHz	31.505 MHz
— HORIZONTAL —								
H-FREQ	31.469 kHz	35.000 kHz	37.500 kHz	43.269 kHz	31.500 kHz	37.927 kHz	37.683 kHz	35.162 kHz
	usec	usec	usec	usec	usec	usec	usec	usec
H. TOTAL	31.778	28.571	26.667	23.111	31.746	26.366	26.537	28.440
H. BLK	6.356	7.407	6.349	5.333	6.349	6.085	6.297	5.586
H. FP	0.636	2.116	0.508	1.556	0.635	1.014	0.450	1.079
H. SYNC	3.813	2.116	2.032	1.556	3.810	2.028	2.024	1.270
H. BP	1.907	3.175	3.810	2.222	1.905	3.042	3.823	3.238
H. ACTIV	25.422	21.164	20.317	17.778	25.397	20.282	20.240	22.854
— VERTICAL —								
V. FREQ(Hz)	59.940 Hz	66.667 Hz	75.000 Hz	85.008 Hz	70.156 Hz	85.039 Hz	75.066 Hz	59.901 Hz
	lines	lines	lines	lines	lines	lines	lines	lines
V. TOTAL	525	525	500	509	449	446	502	587
V. BLK	45	45	20	29	49	46	22	107
V. FP	10	3	1	1	12	1	2	12
V. SYNC	2	3	3	3	3	3	3	2
V. BP	33	39	16	25	34	42	17	93
V. ACTIV	480	480	480	480	400	400	480	480
— SYNC —								
INT(G)	NO	NO	NO	NO	NO	NO	NO	NO
EXT(H/V)/POLARITY	YES N/N	YES N/N	YES N/N	YES N/N	YES N/P	YES N/P	YES N/N	YES N/N
EXT(CS)/POLARITY	NO	NO	NO	NO	NO	NO	NO	NO
INT/NON INT	NON INT	NON INT	NON INT	NON INT	NON INT	NON INT	NON INT	NON INT

PRIMARY MODE MODE AT PRODUCTION	MODE 8	MODE 9	MODE 10	MODE 11	MODE 12	MODE 13	MODE 14	MODE 15
RESOLUTION	800 X 600	800 X 600	800 X 600	800 X 600	—	—	832 X 624	1024 X 768
CLOCK	36.000 MHz	40.000 MHz	49.500 MHz	56.250 MHz	—	—	57.285 MHz	65.000 MHz
— HORIZONTAL —								
H-FREQ	35.156 kHz	37.879 kHz	46.875 kHz	53.674 kHz	—	—	46.727 kHz	48.363 kHz
	usec	usec	usec	usec	—	—	usec	usec
H. TOTAL	28.444	26.400	21.333	18.631	—	—	20.110	20.677
H. BLK	6.222	6.400	5.172	4.409	—	—	5.586	4.923
H. FP	0.667	1.000	0.323	0.569	—	—	0.559	0.369
H. SYNC	0.889	3.200	1.616	1.138	—	—	1.117	2.092
H. BP	4.667	2.200	3.232	2.702	—	—	3.910	2.462
H. ACTIV	22.222	20.000	16.162	14.222	—	—	14.524	15.754
— VERTICAL —								
V. FREQ(Hz)	56.250 Hz	60.317 Hz	75.000 Hz	85.061 Hz	—	—	74.553 Hz	60.004 Hz
	lines	lines	lines	lines	—	—	lines	lines
V. TOTAL	625	628	625	631	—	—	667	806
V. BLK	25	28	25	31	—	—	43	38
V. FP	1	1	1	1	—	—	3	3
V. SYNC	2	4	3	3	—	—	3	6
V. BP	22	23	21	27	—	—	37	29
V. ACTIV	600	600	600	600	—	—	624	768
— SYNC —								
INT(G)	NO	NO	NO	NO	—	—	NO	NO
EXT(H/V)/POLARITY	YES N/N	YES P/P	NO P/P	YES P/P	—	—	YES N/N	YES N/N
EXT(CS)/POLARITY	NO	NO	NO	NO	—	—	NO	NO
INT/NON INT	NON INT	NON INT	NON INT	NON INT	—	—	NON INT	NON INT

PRIMARY MODE MODE AT PRODUCTION	MODE 16	MODE 17	MODE 18	MODE 19	MODE 20	MODE 21	MODE 22	MODE 23
RESOLUTION	1024 X 768	1024 X 768	—	1024 X 768	800 X 600	1024 X 768	1024 X 768	848 X 480
CLOCK	75.000 MHz	78.750 MHz	—	80.000 MHz	50.000 MHz	71.640 MHz	80.000 MHz	38.336 MHz
— HORIZONTAL —								
H-FREQ	56.476 kHz	60.023 kHz	—	60.241 kHz	48.077 kHz	53.946 kHz	60.241 kHz	35.300 kHz
	usec	usec	—	usec	usec	usec	usec	usec
H. TOTAL	17.707	16.660	—	16.600	20.800	18.537	16.600	28.328
H. BLK	4.053	3.657	—	3.800	4.800	4.243	3.800	6.208
H. FP	0.320	0.203	—	0.400	1.120	0.223	0.400	1.409
H. SYNC	1.813	1.219	—	1.200	2.400	2.457	2.200	3.130
H. BP	1.920	2.235	—	2.200	1.280	1.563	1.200	1.669
H. ACTIV	13.653	13.003	—	12.800	16.000	14.294	12.800	22.120
— VERTICAL —								
V. FREQ(Hz)	70.069 Hz	75.029 Hz	—	74.927 Hz	72.188 Hz	66.110 Hz	74.927 Hz	59.932 Hz
	lines	lines	—	lines	lines	lines	lines	lines
V. TOTAL	806	800	—	804	666	816	804	589
V. BLK	38	32	—	36	66	48	36	109
V. FP	3	1	—	3	37	8	3	11
V. SYNC	6	3	—	3	6	4	3	3
V. BP	29	28	—	30	23	36	30	95
V. ACTIV	768	768	—	768	600	768	768	480
— SYNC —								
INT(G)	NO	NO	—	NO	NO	NO	NO	NO
EXT(H/V)/POLARITY	YES N/N	YES P/P	—	YES N/N	YES N/N	YES N/N	YES N/N	YES N/N
EXT(CS)/POLARITY	NO	NO	—	NO	NO	NO	NO	NO
INT/NON INT	NON INT	NON INT	—	NON INT	NON INT	NON INT	NON INT	NON INT

PRIMARY MODE MODE AT PRODUCTION	MODE 24	MODE 25	MODE 26	MODE 27	MODE 28	MODE 29	MODE 30	MODE 31
RESOLUTION	640 X 400	640 X 350	640 X 400	640 X 480	1024 X 768	640 X 400	720 X 400	800 X 600
CLOCK	25.180 MHz	31.500 MHz	31.500 MHz	31.500 MHz	65.000 MHz	24.870 MHz	28.320 MHz	36.000 MHz
— HORIZONTAL —								
H-FREQ	31.475 kHz	37.861 kHz	37.861 kHz	37.861 kHz	48.077 kHz	30.478 kHz	31.467 kHz	35.156 kHz
	usec	usec	usec	usec	usec	usec	usec	usec
H. TOTAL	31.771	26.413	26.413	26.413	20.800	32.811	31.780	28.444
H. BLK	6.354	6.095	6.095	6.095	5.046	7.077	6.356	6.222
H. FP	0.953	1.016	1.016	0.762	0.462	0.322	0.636	0.167
H. SYNC	2.542	2.032	2.032	1.270	1.477	3.860	3.814	5.111
H. BP	2.859	3.048	3.048	4.063	3.108	2.895	1.907	0.944
H. ACTIV	25.417	20.317	20.317	20.317	15.754	25.734	25.424	22.222
— VERTICAL —								
V. FREQ(Hz)	70.100 Hz	85.080 Hz	85.080 Hz	72.809 Hz	59.797 Hz	59.996 Hz	50.026 Hz	56.160 Hz
	lines	lines	lines	lines	lines	lines	lines	lines
V. TOTAL	449	445	445	520	804	508	629	626
V. BLK	49	95	45	40	36	108	229	26
V. FP	11	32	1	9	3	37	102	2
V. SYNC	2	3	3	3	4	2	2	1
V. BP	36	60	41	28	29	69	125	23
V. ACTIV	400	350	400	480	768	400	400	600
— SYNC —								
INT(G)	NO	NO	NO	NO	NO	NO	NO	NO
EXT(H/V)/POLARITY	YES N/N	YES P/N	YES N/P	YES N/N	YES N/N	YES N/N	YES N/N	YES N/N
EXT(CS)/POLARITY	NO	NO	NO	NO	NO	NO	NO	NO
INT/NON INT	NON INT	NON INT	NON INT	NON INT	NON INT	NON INT	NON INT	NON INT

PRIMARY MODE MODE AT PRODUCTION	MODE 32	MODE 33	MODE 34	MODE 35	MODE 36
RESOLUTION	800 X 600	1024 X 768	1024 X 768	1024 X 768	800 X 600
CLOCK	50.000 MHz	64.000 MHz	65.000 MHz	64.000 MHz	39.530 MHz
— HORIZONTAL —					
H-FREQ	48.828 kHz	48.780 kHz	48.363 kHz	48.485 kHz	37.434 kHz
	usec	usec	usec	usec	usec
H. TOTAL	20.480	20.500	20.677	20.625	26.714
H. BLK	4.480	4.500	4.923	4.625	6.476
H. FP	0.960	1.000	0.615	1.219	1.012
H. SYNC	1.600	1.500	3.200	1.219	2.530
H. BP	1.920	2.000	1.108	2.188	2.934
H. ACTIV	16.000	16.000	15.754	16.000	20.238
— VERTICAL —					
V. FREQ(Hz)	66.888 Hz	59.561 Hz	60.078 Hz	59.637 Hz	59.608 Hz
	lines	lines	lines	lines	lines
V. TOTAL	730	819	805	813	628
V. BLK	130	51	37	45	28
V. FP	48	12	3	39	5
V. SYNC	6	6	3	3	1
V. BP	76	33	31	3	22
V. ACTIV	600	768	768	768	600
— SYNC —					
INT(G)	YES	NO	NO	NO	NO
EXT(H/V)/POLARITY	YES N/N	YES N/N	YES N/N	YES N/N	YES N/N
EXT(CS)/POLARITY	NO	NO	NO	NO	NO
INT/NON INT	NON INT	NON INT	NON INT	NON INT	NON INT

2000.1.11 VER.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cords for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the B+ and HV to see if they are specified values. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
8. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC Leakage. Check leakage as described below.

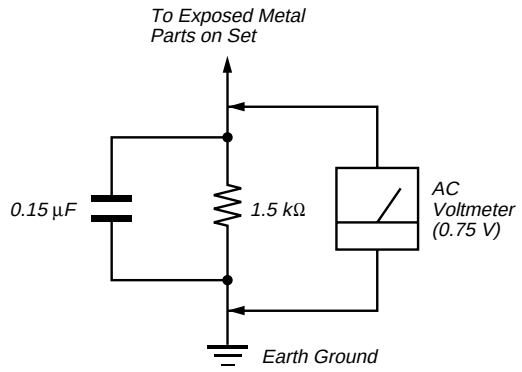


Fig. A. Using an AC voltmeter to check AC leakage.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers).

Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOMs that are suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

WARNING!!

NEVER TURN ON THE POWER IN A CONDITION IN WHICH THE DEGAUSS COIL HAS BEEN REMOVED.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL FOR SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

AVERTISSEMENT!!

NE JAMAIS METTRE SOUS TENSION QUAND LA BOBINE DE DEMAGNETISATION EST ENLEVÉE.

ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET UNE MARQUE ⚠ SONT CRITIQUES POUR LA SÉCURITÉ. NE LES REMPLACER QUE PAR UNE PIÈCE PORTANT LE NUMÉRO SPECIFIÉ. LES RÉGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT SONT IDENTIFIÉS DANS LE PRÉSENT MANUEL. SUIVRE CES PROCÉDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONCTIONNEMENT EST SUSPECTÉ.

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SECTION 1
GENERAL

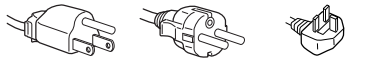
The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remein as in the manual.

Precautions

Warning on power connections

- Use the supplied power cord. If you use a different power cord, be sure that it is compatible with your local power supply.
  For the customers in the U.S.A.
  If you do not use the appropriate cord, this monitor will not conform to mandatory FCC standards.
  For the customers in the UK
  If you use the monitor in the UK, please use the appropriate UK power cord.

Example of plug types



for 100 to 120 V AC | for 200 to 240 V AC | for 240 V AC only

The equipment should be installed near an easily accessible outlet.

Installation

Do not install or leave the monitor:

- In places subject to extreme temperatures, for example near a radiator, heating vent, or in direct sunlight. Subjecting the monitor to extreme temperatures, such as in an automobile parked in direct sunlight or near a heating vent, could cause deformations of the casing or malfunctions.
- In places subject to mechanical vibration or shock.
- Near any equipment that generates a strong magnetic field, such as a TV or various other household appliances.
- In places subject to inordinate amounts of dust, dirt, or sand, for example near an open window or an outdoor exit. If setting up temporarily in an outdoor environment, be sure to take adequate precautions against airborne dust and dirt. Otherwise irreparable malfunctions could occur.

Handling the LCD screen

- Do not leave the LCD screen facing the sun as it can damage the LCD screen. Take care when you place the monitor by a window.
- Do not push on or scratch the LCD screen. Do not place a heavy object on the LCD screen. This may cause the screen to lose uniformity or cause LCD panel malfunctions.
- If the monitor is used in a cold place, a residual image may appear on the screen. This is not a malfunction. The screen returns to normal as the temperature rises to a normal operating level.
- If a still picture is displayed for a long time, a residual image may appear for a while. The residual image will eventually disappear.
- The LCD panel becomes warm during operation. This is not a malfunction.

Maintenance

- Be sure to unplug the power cord from the power outlet before cleaning your monitor.
- Clean the LCD screen with a soft cloth. If you use a glass cleaning liquid, do not use any type of cleaner containing an anti-static solution or similar additive as this may scratch the LCD screen's coating.
- Clean the cabinet, panel, and controls with a soft cloth lightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder, or solvent, such as alcohol or benzine.
- Do not rub, touch, or tap the surface of the screen with sharp or abrasive items such as a ballpoint pen or screwdriver. This type of contact may result in a scratched picture tube.
- Note that material deterioration or LCD screen coating degradation may occur if the monitor is exposed to volatile solvents such as insecticide, or if prolonged contact is maintained with rubber or vinyl materials.

Transportation

- Disconnect all cables from the monitor when transporting.
  When you transport this display, grasp the support and base sections of the display stand firmly with both hands. Also use both hands when carrying the media engine. If you drop the monitor, you may be injured or the monitor may be damaged.
- When you transport this monitor for repair or shipment, use the original carton and packing materials.

Replacement of the fluorescent tube

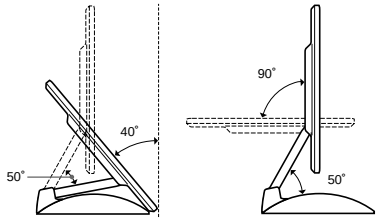
A specially designed fluorescent tube is installed as the lighting apparatus for this monitor. If the screen becomes dark, unstable, or does not turn on, replace the fluorescent tube with a new one. Consult your Sony dealer when replacing the fluorescent tube.

Disposal of the monitor

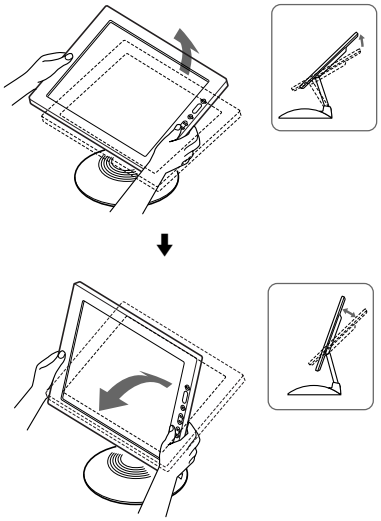
- **Do not dispose of this monitor with general household waste.**
- **The fluorescent tube used in this monitor contains mercury. Disposal of this monitor must be carried out in accordance to the regulations of your local sanitation authority.**

To adjust the tilt and height

This display can be adjusted within the angles shown below.



To adjust the angles, grasp the lower sides of the LCD panel with both hands as shown below. Tilt the LCD panel adequately backward, then lift the LCD panel upward to the desired screen height, then adjust the screen tilt as desired. When adjusting the screen height and tilt, proceed slowly and carefully, being sure not to hit the LCD panel against the desk or the base of the display stand.

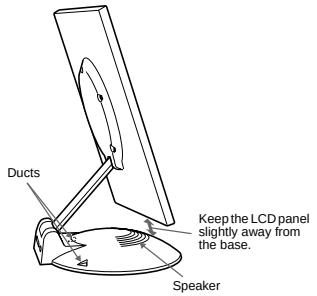


To use the display comfortably

This display is designed so that you can set it up at a comfortable viewing angle. Adjust the viewing angle of your display according to the height of the desk and chair, and so that light is not reflected from the screen to your eyes.

To enjoy clear sound from the built-in stereo speaker

This monitor has a built-in stereo speaker in base of the display stand.
We recommend that you position the LCD panel slightly away from the display stand. High tones from the speaker may be muffled if the LCD panel is positioned immediately on top of the stand. Be careful not to drop any metal object into the speaker's vents as the speakers generate a magnetic field. Also, this magnetic field may affect data stored on magnetic tapes and discs. Be sure to keep magnetic recording equipment, tapes, and floppy discs away from the speaker's opening.
A duct is provided on the rear part of the display stand to boost the bass. Be sure not to block the duct with paper or other objects to ensure clear sound.



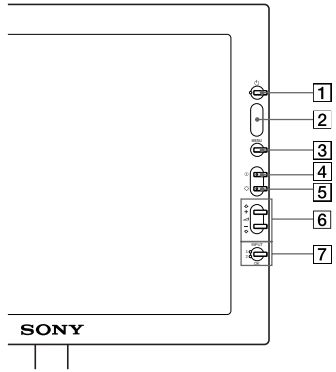
1-1

US

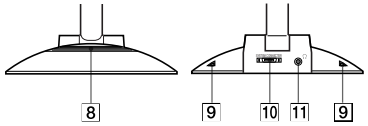
Identifying parts and controls

See the pages in parentheses for further details.

LCD display



Front **Rear**



1 ⏻ **(Power) switch and indicator (pages 9, 17, 22)**
This switch turns the display on and off.
The indicator lights up in green when the monitor is turned on. The indicator flashes in green and orange when the monitor is in low power consumption mode, and lights up in orange when the monitor is in power saving mode.

2 Light sensor and user sensor (pages 16, 17, 18)
These sensors measure the brightness of the surrounding area and detect when a user becomes present in front of the screen. Be sure not to cover the sensor with papers, etc.

3 MENU button (page 12)
This button displays the main menu.

4 ◑ **(contrast) button (page 12)**
This button displays the CONTRAST menu.

5 ☼ **(brightness) button (page 12)**
This button displays the BRITGHTNESS menu.

6 ◿ **(volume) +/– and ↑(+)/↓(–) buttons (pages 10, 12)**
These buttons display the VOLUME menu and function as the ↑(+)/↓(–) buttons when selecting the menu items and making adjustments.

7 INPUT and OK button, and indicator (pages 10, 12)
This button selects the INPUT 1 or INPUT 2 (HD15 (RGB) connectors) video input signal. The input signal and corresponding input indicator change each time you press this button.
This button also functions as the OK button when displaying the menu on the screen.

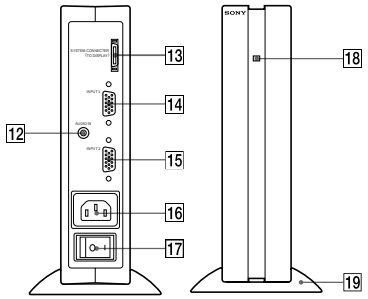
8 Stereo speaker (page 10)
This outputs the audio signals as sound.

9 Ducts
These are used to boost the bass sound from the speaker.

10 SYSTEM CONNECTOR (page 8)
This connector inputs signals from the media engine when the display and the media engine are connected with a system connecting cable.

11 Headphones jack (page 10)
This jack outputs audio signals to the headphones.

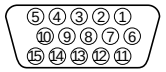
Media engine



12 AUDIO IN jack (page 10)
This jack inputs audio signals when connecting to the audio output jack of the computer or other audio equipment.

13 SYSTEM CONNECTOR (TO DISPLAY) (page 8)
This connector outputs signals to the display when the display and the media engine are connected with a system connecting cable.

14 HD15 (RGB) input 1 connector (INPUT1) (page 8)
This connector inputs RGB video signals (0.700 Vp-p, positive) and SYNC signals.



Pin No.	Signal
1	Red
2	Green (Sync on Green)
3	Blue
4	ID (Ground)
5	DDC Ground*
6	Red Ground
7	Green Ground
8	Blue Ground
9	DDC + 5V*
10	Ground
11	ID (Ground)
12	Bi-Directional Data (SDA)*
13	H. Sync
14	V. Sync
15	Data Clock (SCL)*

* DDC (Display Data Channel) is a standard of VESA.

15 HD15 (RGB) input 2 connector (INPUT2) (page 8)
This connector inputs RGB video signals (0.700 Vp-p, positive) and SYNC signals. The pin assignment is the same as 14.

16 AC IN connector (page 9)
This connector provides AC power to the monitor.

17 AC power switch (page 9)
This switch turns the monitor on and off. When the AC power switch is turned on, the display automatically turns on.

18 AC power indicator (page 17)
This indicator lights up in green when the media engine is turned on. The indicator lights up in red when the display is turned off with the media engine on. The indicator lights up in orange when the monitor is in the power saving mode.

19 Media engine stand
This stand is used to install the media engine vertically.

Caution
Be sure to install the media engine vertically shown as left. Installing the media engine lying flat may block ventilation, and may cause a malfunction.

US

Setup

Before using your monitor, check that the following accessories are included in your carton:

- LCD display
- Media engine
- Media engine stand
- Power cord
- System connecting cable (2 m) (applicable cable type: DP-2)
- HD15 (RGB) video signal cable
- Audio cord (stereo miniplug)
- Macintosh adapter
- Windows Monitor Information Disk/Utility Disk
- Macintosh Utility Disk
- Warranty card
- Notes for Macintosh users
- This instruction manual

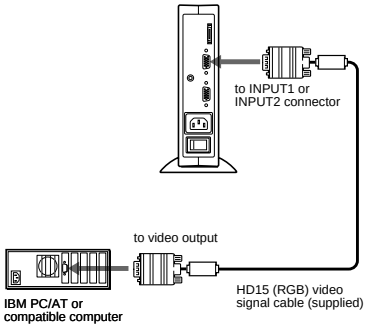
Step 1: Connect the media engine to your computer

Turn off the media engine and computer before connecting.

Note

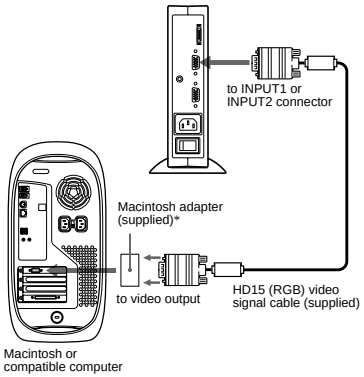
Do not touch the pins of the video signal cable connector as this might bend the pins.

■ Connecting to an IBM PC/AT or compatible computer



■ Connecting to a Macintosh or compatible computer

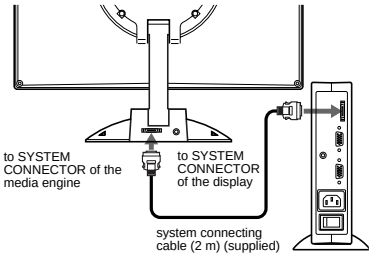
Use the supplied Macintosh adapter.



* Refer to the supplied "Notes for Macintosh users" for further details.

Step 2: Connect the display and media engine

Turn off the display and media engine before connecting.



Caution

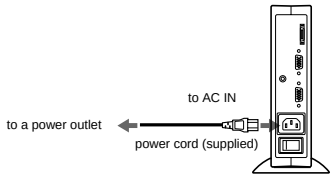
Be sure to install the media engine vertically shown as above. Installing the media engine lying flat may block ventilation, and may cause a malfunction.

Note

Grasp the plug when connecting the cable.

Step 3: Connect the power cord

With the media engine, display, and computer switched off, first connect the power cord to the media engine, then connect it to a power outlet.



Step 4: Turn on the monitor and computer

1 Turn on the media engine.

The display automatically turns on. The indicators of the media engine and display light up in green.

2 Turn on the computer.

The installation of your monitor is complete. If necessary, use the monitor's controls to adjust the picture.

If no picture appears on your screen

- Check that the monitor is correctly connected to the computer.
- Check that the media engine is on.
- If NO INPUT SIGNAL appears on the screen, try changing the input signal (page 10), and confirm that your computer's graphic board is completely seated in the correct bus slot.
- If OUT OF SCAN RANGE appears on the screen, reconnect the old monitor. Then adjust the computer's graphic board so that the horizontal frequency is between 30 – 61 kHz, and the vertical frequency is between 50 – 85 Hz (only XGA mode at 75 Hz).

For more information about the on-screen messages, see "Trouble symptoms and remedies" on page 20.

For customers using Windows 95/98

To maximize the potential of your monitor, install the new model information file from the supplied Windows Monitor Information Disk onto your PC.

This monitor complies with the "VESA DDC" Plug & Play standard. If your PC/graphics board complies with DDC, select "Plug & Play Monitor (VESA DDC)" or this monitor's model name as the monitor type in the "Control Panel" of Windows 95/98. If your PC/graphics board has difficulty communicating with this monitor, load the Windows Monitor Information Disk and select this monitor's model name as the monitor type.

For customers using Windows NT4.0

Monitor setup in Windows NT4.0 is different from Windows 95/98 and does not involve the selection of monitor type. Refer to the Windows NT4.0 instruction manual for further details on adjusting the resolution, refresh rate, and number of colors.

Adjusting the monitor's resolution and color number

Adjust the monitor's resolution and color number by referring to your computer's instruction manual. The color number may vary according to your computer or video board. The color palette setting and the actual number of colors are as follows:

- High Color (16 bit) → 65,536 colors
- True Color (24 bit) → about 16.77 million colors

In true color mode (24 bit), speed may be slower.

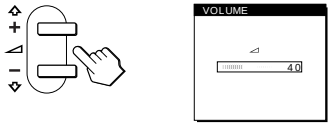
Using the stereo speaker

You can listen to music, sounds, and other audio files using the stereo speaker of your monitor.
Connect the AUDIO IN jack to the audio output jack of your computer or other audio equipment using the supplied audio cord (stereo miniplug).

Adjusting the volume

Volume adjustments are made using a separate VOLUME menu from the main menu (page 11).

1 Press the ◿ +/– buttons.
The VOLUME menu appears on the screen.



2 Press the ◿ +/– button to adjust the volume.

The menu automatically disappears after about 3 seconds.

Using the headphones jack

You can listen to the audio signals from your computer or other audio equipment using headphones. Connect your headphones to the headphones jack. The speaker turns off when headphones are connected to the headphones jack. Adjust the volume of the headphones using the VOLUME menu.

Notes
- You cannot adjust the volume when displaying the main menu on the screen.
- When your monitor is in low power consumption mode or power saving mode, no sound comes from the speaker.

Selecting the input signal

You can connect two computers to this monitor using the INPUT 1 and INPUT 2 connectors. To select one of the two computers, use the INPUT button.

Press the INPUT button.
The input signal and corresponding input indicator, "1" (INPUT 1) or "2" (INPUT 2) change each time you press this button.

Notes
- You cannot select the input signal when displaying the main menu on the screen.
- If no signal is input to the selected connector, NO INPUT SIGNAL appears on the screen. After a few seconds, the monitor enters the power saving mode. If this happens, select the other connector using the INPUT button.

Customizing Your Monitor

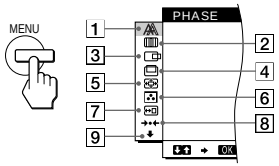
Before making adjustments

Connect the monitor and the computer, and turn them on. Wait for at least 30 minutes before making adjustments for the best result.

You can make numerous adjustments to your monitor using the on-screen menu.

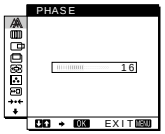
Navigating the menu

Press the MENU button to display the main menu on your screen. See page 12 for more information on using the MENU button.

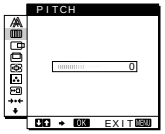


Use the ↑(+)/↓(–) and OK buttons to select one of the following menus. See page 12 for more information on using the ↑(+)/↓(–) and OK buttons.

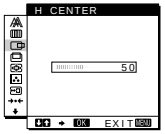
1 PHASE (page 13)
Select the PHASE menu to adjust the phase when the characters or pictures appear fuzzy throughout the entire screen. Adjust the phase after adjusting the pitch.



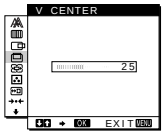
2 PITCH (page 13)
Select the PITCH menu to adjust the pitch when the characters or pictures are unclear in some areas of the screen.



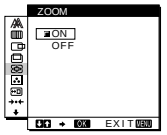
3 H CENTER (page 13)
Select the H CENTER menu to adjust the picture's horizontal centering.



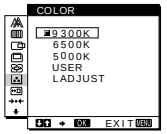
4 V CENTER (page 13)
Select the V CENTER menu to adjust the picture's vertical centering.



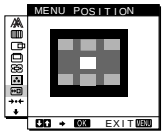
5 ZOOM (page 14)
Select the ZOOM menu to adjust the picture's sharpness according to the input signal's aspect ratio or resolution.



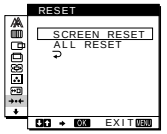
6 COLOR (page 14)
Select the COLOR menu to adjust the color temperature of the picture. This adjusts the tone of the screen.



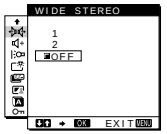
7 MENU POSITION (page 14)
Select the MENU POSITION to change the on-screen menu position.



8 RESET (page 15)
Select the RESET menu to reset the adjustments.



9 Option (page 15)
Select ↓ (option) menu to adjust the monitor's options. The options include:
- WIDE STEREO
- BASS BOOST
- BACKLIGHT
- LIGHT SENSOR
- POWER SAVE
- USER SENSOR
- LANGUAGE
- MENU LOCK



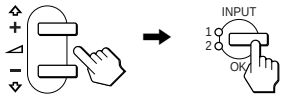
US

(continued)

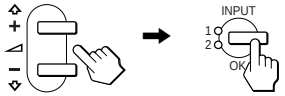
■ Using the MENU, ↑(+)/↓(–), and OK buttons

1 Display the main menu.
Press the MENU button to display the main menu on your screen.

2 Select the menu you want to adjust.
Press the ↑(+)/↓(–) buttons to display the desired menu. Press the OK button to select the menu item.



3 Adjust the menu.
Press the ↑(+)/↓(–) buttons to make the adjustment. Then press the OK button to return to the previous menu.



4 Close the menu.
Press the MENU button once to return to normal viewing. If no buttons are pressed, the menu closes automatically after about 30 seconds.

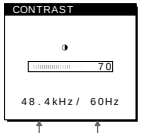
■ Resetting the adjustments

You can reset the adjustments using the RESET menu. See page 15 for more information on resetting the adjustments.

Adjusting the contrast (CONTRAST)

Contrast adjustment is made using a separate CONTRAST menu from the main menu (page 11). This setting is stored in memory for the signal from the currently selected input connector.

1 Press the ◑ (contrast) button.
The CONTRAST menu appears on the screen.



Horizontal frequency of the current input signal

Vertical frequency of the current input signal

Displaying the current input signal
The horizontal and vertical frequencies of the current input signal are displayed in the CONTRAST and BRIGHTNESS menu.

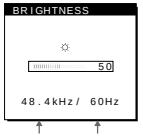
2 Press the ↑(+)/↓(–) buttons to adjust the contrast.

The menu automatically disappears after about 3 seconds.

Adjusting the black level of an image (BRIGHTNESS)

Brightness adjustment is made using a separate BRIGHTNESS menu from the main menu (page 11). This setting is stored in memory for the signal from the currently selected input connector.

1 Press the ☼ (brightness) button.
The BRIGHTNESS menu appears on the screen.



Horizontal frequency of the current input signal

Vertical frequency of the current input signal

2 Press the ↑(+)/↓(–) buttons to adjust the brightness.

If the screen is too bright

Adjust the backlight. For more information about adjusting the backlight see “Adjusting the backlight” on page 16.

The menu automatically disappears after about 3 seconds.

Note
You can adjust neither contrast nor brightness when displaying the main menu on the screen.

Eliminating flicker or blurring (PHASE/PITCH)

When the monitor receives an input signal, the automatic picture quality adjustment function of this monitor automatically adjusts the picture position, phase, and pitch, and ensures that a clear picture appears on the screen. For more information about this function, see “Automatic picture quality adjustment function” on page 18.
For some input signals, this function may not completely adjust the picture position, phase, and pitch. In this case, you can manually set these adjustments according the following instructions. If you manually set these adjustments, they are stored in memory and automatically recalled whenever the monitor receives the same input signals.
These settings may have to be repeated if you change the input signal after reconnecting your computer.

1 Set the resolution to 1024 × 768 on the computer.

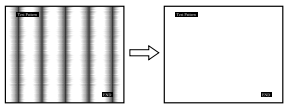
2 Load the Utility Disk.
Use the appropriate disk for your computer.
For Windows 95/98
Windows Monitor Information Disk/Utility Disk
For Macintosh
Macintosh Utility Disk

3 Start the Utility Disk and display the test pattern.
For Windows 95/98
Click [Utility Disk] → [Windows]/[Utility.exe].
For Macintosh
Click [Utility Disk] → [SONY-Utility].

4 Press the MENU button.
The main menu appears on the screen.

5 Press the ↑(+)/↓(–) buttons to select (PITCH) and press the OK button.
The PITCH menu appears on the screen.

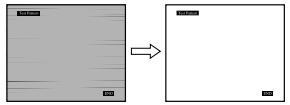
6 Press the ↑(+)/↓(–) buttons until the screen color becomes uniform.
Adjust so that the vertical stripes disappear.



7 Press the OK button.
The main menu appears on the screen.
If horizontal stripes are observed over the entire screen, adjust the phase as the next step.

8 Press the ↑(+)/↓(–) buttons to select (PHASE) and press the OK button.
The PHASE menu appears on the screen.

9 Press the ↑(+)/↓(–) buttons until the screen color becomes uniform.
Adjust so that the horizontal stripes are at a minimum.



10 Click END on the screen to turn off the test pattern.

To reset the automatic picture quality adjustment
Select SCREEN RESET and activate it using the RESET menu. See page 15 for more information on using the RESET menu.

Adjusting the picture position (H CENTER/V CENTER)

If the picture is not in the center of the screen, adjust the picture’s centering as follows.
These settings may have to be repeated if you change the input signal after reconnecting your computer.

1 Start the Utility Disk and display the test pattern.
Repeat steps 2 and 3 of “Eliminating flicker or blurring (PHASE/PITCH).”

2 Press the MENU button.
The main menu appears on the screen.

3 Press the ↑(+)/↓(–) buttons to select (H CENTER) or (V CENTER) and press the OK button.
The H CENTER or V CENTER menu appears on the screen.

4 Move the picture up, down, left, or right until the frame at the perimeter of the test pattern disappears.
Press the ↑(+)/↓(–) buttons to adjust the picture’s centering using the H CENTER menu for horizontal adjustment, or the V CENTER menu for vertical adjustment.

5 Click END on the screen to turn off the test pattern.

US

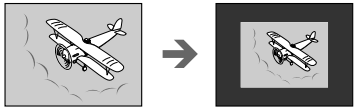
Displaying a low-resolution signal at the actual resolution (ZOOM)

This monitor is preset at the factory to display pictures on the screen in full, irrespective of the picture's mode or resolution. You can also view the picture at its actual resolution.

1 Press the MENU button.
The main menu appears on the screen.

2 Press the ↑(+)/↓(–) buttons to select (ZOOM) and press the OK button.
The ZOOM menu appears on the screen.

3 Press the ↓(–) button to select OFF.
The input signal is displayed on the screen at its actual resolution.



To display the picture on the screen in full
Select ON in step 3.

Adjusting the color temperature (COLOR)

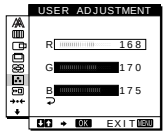
The COLOR settings allow you to adjust the picture's color temperature by changing the color level of the white color field. Colors appear reddish if the temperature is low, and bluish if the temperature is high.
9300K is generally suitable for word processing and other text oriented applications, and 6500K is generally suitable for video images.
You can set the color temperature to 5000K, 6500K, 9300K or user adjustment.

1 Press the MENU button.
The main menu appears on the screen.

2 Press the ↑(+)/↓(–) buttons to select (COLOR) and press the OK button.
The COLOR menu appears on the screen.

3 Press the ↑(+)/↓(–) buttons to select the desired color temperature.
The preset color temperatures are 5000K, 6500K, and 9300K. Since the default setting is 9300K, the whites will change from a bluish hue to a reddish hue as the temperature is lowered to 6500K and 5000K.
You can set separate color temperatures for each of the video input signals.

4 If necessary, fine tune the color temperature.
First press the ↑(+)/↓(–) buttons to select ADJUST and press the OK button. Then press the ↑(+)/↓(–) buttons to select R (Red) or B (Blue) and press the OK button, and then press the ↑(+)/↓(–) buttons to adjust the color temperature. Since this adjustment changes the color temperature by increasing or decreasing the R and B components with respect to G (green), the G component is fixed.



If you fine tune the color temperature, the new color setting is stored in memory for USER ADJUSTMENT and automatically recalled whenever USER is selected.
The USER ADJUSTMENT setting is common to both the input signals. If you change the user adjustment setting for one input signal, the setting for the other input signal is also changed.

Changing the menu's position (MENU POSITION)

You can change the menu position if it is blocking an image on the screen.

1 Press the MENU button.
The main menu appears on the screen.

2 Press the ↑(+)/↓(–) buttons to select (MENU POSITION) and press the OK button.
The MENU POSITION menu appears on the screen.

3 Press the ↑(+)/↓(–) buttons to select the desired position.
There are three positions each for the top of the screen and the bottom of the screen, and one for the screen center.

Resetting the adjustments (RESET)

This monitor has the following two reset methods. Use the RESET menu to reset the adjustments.

1 Press the MENU button.
The main menu appears on the screen.

2 Press the ↑(+)/↓(–) buttons to select (RESET) and press the OK button.
The RESET menu appears on the screen.
Reset the settings according to the following instructions.

Resetting the adjustment data most appropriately for the current input signal

Press the ↑(+)/↓(–) buttons to select SCREEN RESET and press the OK button.
The automatic picture quality adjustment function of this monitor automatically adjusts the picture position, phase, and pitch, to the most appropriate value. If this function is activated, the phase is automatically adjusted whenever the monitor receives the same input signal.
The RESET menu is automatically returned to the main menu after the adjustment data is reset.

Resetting all of the adjustment data for all input signals

Press the ↑(+)/↓(–) buttons to select ALL RESET and press the OK button.
The RESET menu is automatically returned to the main menu after the adjustment data is reset.

To cancel resetting

Press the ↑(+)/↓(–) buttons to select and press the OK button.
The RESET menu returns to the main menu without resetting the adjustment data.

Additional settings (Option)

You can adjust the following options:
- WIDE STEREO
- BASS BOOST
- BACKLIGHT
- LIGHT SENSOR
- POWER SAVE
- USER SENSOR
- LANGUAGE
- MENU LOCK

1 Press the MENU button.
The main menu appears on the screen.

2 Press the ↑(+)/↓(–) buttons to select ↓.
The option menu appears on the screen.

3 Press the ↑(+)/↓(–) buttons to select the desired option item and press the OK button.
Adjust the selected option item according to the following instructions.

Increasing the soundscape (wide stereo function)

This adjustment makes use of the DSP and creates the illusion of the built-in stereo speaker being further away than it actually is, thus enhancing sound presence.
First press the ↑(+)/↓(–) buttons to select (WIDE STEREO) and press the OK button. Then press the ↑(+)/↓(–) buttons to select either 2, 1, or OFF.
The wide stereo function is used to increase the soundscape. Selecting 1 or 2 increases incrementally the soundscape effect toward the front of the monitor.

Notes
- If your connected computer or audio equipment uses special sound functions, such as surround sound, be sure to turn these functions off. If these functions are being used with the wide stereo function of this monitor, the wide stereo function may not function properly and thus not produce the desired sound effect.
- This function is automatically turned off when you use headphones. However, in this case, the indication in the WIDE STEREO menu does not change.
- The wide stereo function allows you to increase the soundscape by converting the analog signals into digital. The sound may be distorted depending on the input signal and music. In this case, decrease the volume or set the wide stereo function to OFF.

Boosting the bass (bass boost function)

This option increases the bass output of the speaker.
First press the ↑(+)/↓(–) buttons to select (BASS BOOST) and press the OK button. Then press the ↑(+)/↓(–) buttons to select either ON or OFF.

(continued)

US

Adjusting the backlight

If the screen is too bright, adjust the backlight.

First press the ↑(+)/↓(–) buttons to select (BACKLIGHT) and press the OK button. Then press the ↑(+)/↓(–) buttons to adjust the desired light level.

Automatically adjusting the screen brightness (light sensor)

This monitor is provided with a sensor to detect the brightness of the surrounding area (light sensor). This sensor is used to automatically adjust the brightness of the screen.

First press the ↑(+)/↓(–) buttons to select (LIGHT SENSOR) and press the OK button. Then press the ↑(+)/↓(–) buttons to select either ON or OFF.

When you select ON, the monitor automatically adjusts the screen brightness according to the brightness of the surroundings. For more information about this function, see “Automatic brightness adjustment function (light sensor)” on page 18.

Note

If this function is set to ON, the value of the BACKLIGHT menu does not change. If the screen brightness is still not appropriate after the automatic adjustment, you can manually adjust the backlight. After the backlight adjustment is made, the monitor automatically adjusts the screen brightness in accordance with the new backlight value.

Setting up the power saving mode

This monitor has a function which enables it to enter the power save mode automatically according to the power saving settings of the computer. You can prevent the monitor from entering the power saving mode by setting the following option to OFF.

First press the ↑(+)/↓(–) buttons to select (POWER SAVE) and press the OK button. Then press the ↑(+)/↓(–) buttons to select either ON or OFF.

Using the user sensor

The user sensor function enables the monitor to enter the low power consumption mode when no one is present in front of the monitor.

First press the ↑(+)/↓(–) buttons to select (USER SENSOR) and press the OK button. Then press the ↑(+)/↓(–) buttons to select either ON or OFF.

If you select ON, the monitor automatically enters the low power consumption mode when you move away from the front of the monitor. For more information about the low power consumption mode, see “Power saving function (user sensor/power saving mode)” on page 17.

Selecting the on-screen menu language

English, German, French, Spanish, Italian and Japanese versions of the on-screen menus are available. The default setting is English.

First press the ↑(+)/↓(–) buttons to select (LANGUAGE) and press the OK button. Then press the ↑(+)/↓(–) button to select a language.

- ENGLISH
- DEUTSCH: German
- FRANÇAIS: French
- ESPAÑOL: Spanish
- ITALIANO: Italian
- 日本語 : Japanese

Locking the menus and controls

You can protect adjustment data by locking the menus and controls.

First press the ↑(+)/↓(–) buttons to select (MENU LOCK) and press the OK button. Then press the ↑(+)/↓(–) buttons and select ON.

Only the ⏻ (power) switch, and (MENU LOCK) of the option menu will operate. If any other items are selected, the mark appears on the screen.

To cancel the menu lock

Repeat the procedure above and set and (MENU LOCK) to OFF.

Technical Features

Power saving function (user sensor/power saving mode)

This monitor meets the power-saving guidelines set by VESA, ENERGY STAR, and NUTEK. If the monitor is connected to a computer or video graphics board that is DPMS (Display Power Management Signaling) compliant, the monitor will automatically enter the power saving mode. It automatically enters the low power consumption mode when the user sensor detects the absence of a user.

Power consumption state	Power consumption	AC power indicator	⏻ (power) indicator
normal operation	35 W	green	green
1 low power consumption mode	≤ 4 W	green	green and orange alternate
2 power saving mode	≤ 3 W	orange	orange
⏻ (power): off	≤ 3 W	red	off
AC power: off	0 W	off	off

1 Low power consumption mode (user sensor)

When the user sensor in the monitor detects the absence of a user, the monitor enters low power consumption mode after about 20 seconds. In low power consumption mode, the monitor is in a power saving state and shuts off power to all circuitry (except for that of the sensors) regardless of the setting of the computer.

The monitor returns to normal operation mode when the presence of a user is detected by the user sensor.

When the monitor enters the power saving mode (as set according to the computer’s settings), the power saving mode takes precedence over the low power consumption mode. In this case, the monitor stays in the power saving mode regardless of the presence or absence of a user.

To return the monitor to normal operation mode, reset the computer’s power saving mode.

Note

The user sensor detects the presence/absence of a user up to a distance of approximately 60 cm from the screen surface. However, this distance may vary depending on the user’s clothes or the brightness of the surrounding area. If user detection fails due to the ambient conditions of the surrounding area, set the user sensor to OFF. If your monitor does not automatically return from low power consumption mode due to the failure of the user sensor to detect the presence of a user, press the ⏻ (power) switch twice to turn the monitor off and then on.

2 Power saving mode

DPMS defines three power saving states according to the state of the sync signals supplied from the computer. This monitor’s power consumption is input at approximately 3 W in all of these states if the power saving function is set to ON.

When your computer enters in the power saving mode, the input signal is cut and NO INPUT SIGNAL appears on the screen. After a few seconds, the monitor enters power saving mode.

Power saving state	Sync signal state
suspend (sleep)*	horizontal: on / vertical: off
standby (sleep)*	horizontal: off / vertical: on
active off (deep sleep)*	horizontal: off / vertical: on

* “Sleep” and “deep sleep” are power saving modes defined by the Environmental Protection Agency.

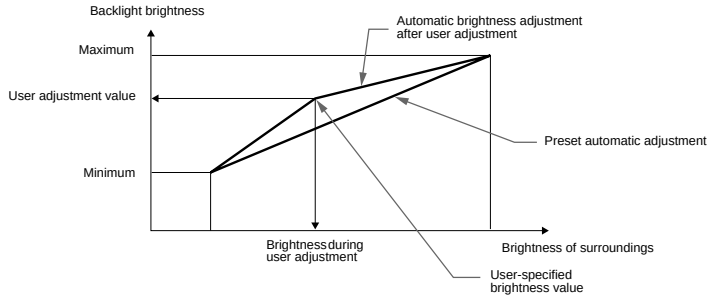
Note

The power saving function may not work normally if sync signals other than those listed above are supplied. In such a case, set the power saving function to OFF.

US

Automatic brightness adjustment function (light sensor)

This monitor is provided with a feature to automatically adjust the screen brightness according to the brightness of the surroundings. The brightness of the backlight is set to the most appropriate level by setting the light sensor to ON. The default setting of the brightness of the backlight is set to its maximum. When the light sensor setting is set to ON, the monitor adjusts the brightness of the backlight linearly from its lower- to upper-limit values. When the user adjusts the backlight, the backlight brightness is automatically adjusted between the user adjustment value and the upper- and lower-limit values.



Automatic picture quality adjustment function

When the monitor receives an input signal, it automatically matches the signal to one of the factory preset modes stored in the monitor's memory to provide a high quality picture at the center of the screen. (See Appendix for a list of the factory preset modes.)
For input signals that do not match one of the factory preset modes, the automatic picture quality adjustment function of this monitor automatically adjusts the picture position, phase, and pitch, and ensures that a clear picture appears on the screen for any timing within the monitor's frequency range (horizontal: 30 – 61 kHz, vertical: 50 – 85 Hz).
Consequently, the first time the monitor receives input signals that do not match one of the factory preset modes, the monitor may take a longer time than normal for displaying the picture on the screen. This adjustment data is automatically stored in memory so that next time, the monitor will function in the same way as when the monitor receives the signals that match one of the factory preset modes.
In all modes as above, if the picture is adjusted, the adjustment data is stored as a user mode and automatically recalled whenever the same input signal is received.

Note on the adjusting the phase
If the automatic picture quality adjustment function is activated, the picture moves slightly whenever the monitor receives the input signal, regardless of the stored adjustment.

Note
While the automatic picture quality adjustment function is activated, only the ⏻ (power) switch, and INPUT button will operate.

Troubleshooting

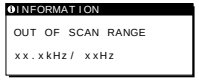
Before contacting technical support, refer to this section.

On-screen messages

If there is something wrong with the input signal, one of the following messages appears on the screen. To solve the problem, see "Trouble symptoms and remedies" on page 20.

If OUT OF SCAN RANGE appears on the screen

This indicates that the input signal is not supported by the monitor's specifications. Check the following items.

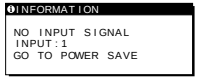


If "xx.x kHz/xx Hz" is displayed
This indicates that either the horizontal or vertical frequency is not supported by the monitor's specifications.
The figures indicate the horizontal and vertical frequencies of the current input signal. The horizontal frequencies above 100 kHz and the vertical frequencies above 100 Hz are represented by 99.9 kHz and 99 Hz, respectively.

If "RESOLUTION > XGA" is displayed
This indicates that the resolution is not supported by the monitor's specifications.

If NO INPUT SIGNAL appears on the screen

This indicates that no signal is input, or that no signal is input from the currently selected connector.

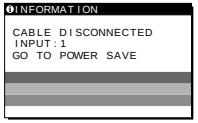


INPUT:
This indicates the currently selected connector (INPUT: 1 or INPUT: 2).

GO TO POWER SAVE
The monitor will enter the power saving mode after about 4 seconds from the message is displayed.

If CABLE DISCONNECTED appears on the screen

This indicates that the video signal cable has been disconnected from the currently selected connector.



INPUT:
This indicates the currently selected connector (INPUT: 1 or INPUT: 2).

GO TO POWER SAVE
The monitor will enter the power saving mode after about 4 seconds from the message is displayed.

US

Trouble symptoms and remedies

If a problem is caused by the connected computer or other equipment, please refer to the connected equipment's instruction manual. Use the self-diagnosis function (page 22) if the following recommendations do not resolve the problem.

Symptom	Check these items
No picture	
If the AC power indicator is not lit	• Check that the power cord is properly connected.
If the AC power indicator is red	• Check that the ⏻ (power) switch is in the "on" position.
If the ⏻ (power) indicator is not lit, or if the ⏻ (power) indicator will not light up when the ⏻ (power) switch is pressed	• Check that the ⏻ (power) switch is in the "on" position. • Check that the AC power switch is in the "on" position. • Check that the system connecting cable is properly connected and all plugs are firmly seated in their sockets (page 8).
If the ⏻ (power) indicator is green or flashing orange	• Use the self-diagnostics function (page 22).
If the ⏻ (power) indicator is alternating between green and orange	• The monitor cannot return from low power consumption mode because the user sensor fails to detect the presence of a user. Press the ⏻ (power) switch twice to turn the monitor off and then on. If you set the user sensor to OFF, the monitor does not enter low power consumption mode (page 16).
If CABLE DISCONNECTED appears on the screen, or the AC power indicator is flashing red	• Check that the video signal cable is properly connected and all plugs are firmly seated in their sockets (page 8). • Check that the video input connector's pins are not bent or pushed in. • A non-supplied video signal cable is connected. If you connect a non-supplied video signal cable, CABLE DISCONNECTED appears on the screen before entering the power saving mode. This is not a malfunction. • Check that the system connecting cable is properly connected and all plugs are firmly seated in their sockets (page 8). • Press the AC power switch twice to turn the monitor off and then on.
If NO INPUT SIGNAL appears on the screen, or the ⏻ (power) indicator is orange	• Check that the video signal cable is properly connected and all plugs are firmly seated in their sockets (page 8). • Check that the input select setting is correct (page 10). • Check that the video input connector's pins are not bent or pushed in. **■Problems caused by the connected computer or other equipment** • The computer is in the power saving mode. Try pressing any key on the keyboard or moving the mouse. • Check that the computer's power is "on." • Check that the graphic board is completely seated in the proper bus slot.
If OUT OF SCAN RANGE appears on the screen	**■Problems caused by the connected computer or other equipment** • Check that the video frequency range is within that specified for the monitor. If you replaced an old monitor with this monitor, reconnect the old monitor and adjust the frequency range to the following: Horizontal: 30 – 61 kHz Vertical frequency: 50 – 85 Hz (only XGA mode at 75 Hz)
If using Windows 95/98	• If you replaced an old monitor with this monitor, reconnect the old monitor and do the following. Install the Windows Monitor Information Disk (page 9) and select this monitor ("SDM-N50") from among the Sony monitors in the Windows 95/98 monitor selection screen.
If using a Macintosh system	• Check and refer to the supplied "Notes for Macintosh users."

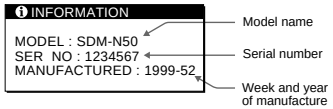
Symptom	Check these items
Picture flickers, bounces, oscillates, or is scrambled	• Adjust the pitch and phase (page 13). • Isolate and eliminate any potential sources of electric or magnetic fields such as other monitors, laser printers, electric fans, fluorescent lighting, or televisions. • Move the monitor away from power lines or place a magnetic shield near the monitor. • Try plugging the monitor into a different AC outlet, preferably on a different circuit. **■Problems caused by the connected computer or other equipment** • Check your graphics board manual for the proper monitor setting. • Confirm that the graphics mode (VESA, Macintosh 19" Color, etc.) and the frequency of the input signal are supported by this monitor (Appendix). Even if the frequency is within the proper range, some video boards may have a sync pulse that is too narrow for the monitor to sync correctly. • Adjust the computer's refresh rate (vertical frequency) to obtain the best possible picture.
Picture is fuzzy	• Adjust the brightness and contrast (page 12). • Adjust the pitch and phase (page 13).
Picture is ghosting	• Eliminate the use of video cable extensions and/or video switch boxes. • Check that all plugs are firmly seated in their sockets.
Picture is not centered or sized properly	• Adjust the pitch and phase (page 13). • Adjust the picture position (page 13). Note that some video modes do not fill the screen to the edges.
The picture is too small	• Set the zoom setting to ON (page 14). **■Problems caused by the connected computer or other equipment** • Set the computer's resolution to the screen's resolution.
Wavy or elliptical pattern (moire) is visible	• Adjust the pitch and phase (page 13).
Color is not uniform	• Adjust the pitch and phase (page 13).
White does not look white	• Adjust the color temperature (page 14).
Monitor buttons do not operate (🔑 appears on the screen)	• If the menu lock is set to ON, set it to OFF (page 16).
The monitor turns off after a while	• Set the power saving function to OFF (page 16). • Set the user sensor to OFF (page 16). **■Problems caused by the connected computer or other equipment** • Set the computer's power saving setting to off.

US

Displaying this monitor's name, serial number, and date of manufacture.

While the monitor is receiving a video signal, press and hold the MENU button for more than 5 seconds to display this monitor's information box.

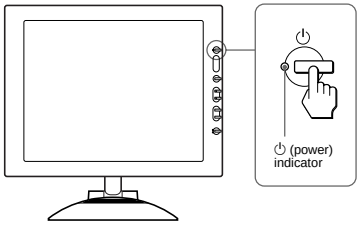
Example



If any problem persists, call your authorized Sony dealer and give the following information:
- Model name: SDM-N50
- Serial number
- Name and specifications of your computer and graphics board.

Self-diagnosis function

This monitor is equipped with a self-diagnosis function. If there is a problem with your monitor or computer(s), the screen will go blank and the ⏻ (power) indicator will either light up green or flash orange. If the ⏻ (power) indicator is lit in orange, the computer is in power saving mode. Try pressing any key on the keyboard or moving the mouse.



If the ⏻ (power) indicator is green

1 Turn off the AC power switch and disconnect the video signal cables from the INPUT1 and INPUT2 connectors of the media engine.

2 Press the AC power switch twice to turn the monitor off and then on.

If all four color bars appear (white, red, green, blue), the monitor is working properly. Reconnect the video input cables and check the condition of your computer(s).

If the color bars do not appear, there is a potential monitor failure. Inform your authorized Sony dealer of the monitor's condition.

If the ⏻ (power) indicator is flashing orange

Press the ⏻ (power) switch twice to turn the monitor off and then on.
If the ⏻ (power) indicator lights up green, the monitor is working properly.

If the ⏻ (power) indicator is still flashing, there is a potential monitor failure. Count the number of seconds between orange flashes of the ⏻ (power) indicator and inform your authorized Sony dealer of the monitor's condition. Be sure to note the model name and serial number of your monitor. Also note the make and model of your computer and graphic board.

Specifications

LCD panel	Panel type: a-Si TFT Active Matrix Picture size: 15 inch (38 cm)
Input signal format	RGB operating frequency* Horizontal: 30 – 61 kHz Vertical: 50 – 85 Hz
Resolution	Horizontal: Max.1024 dots Vertical: Max.768 lines
Input signal levels	RGB video signal 0.700 Vp-p, 75 Ω, positive SYNC signal TTL level, 2 kΩ, positive or negative (Separate horizontal and vertical, or composite sync) 0.3 Vp-p, 75Ω, negative (Sync on green)
Audio output	2W × 2
Headphones jack	Stereo minijack Accepts impedance of 16 – 48Ω
AUDIO IN jack	Stereo minijack Accepts impedance of 16 kΩ Accepts level 0.5 Vrms
Power requirements	100 – 240 V, 50 – 60 Hz, 0.55 – 0.3 A
Power consumption	Max. 35 W
Operating temperature	5 – 35 °C
Dimensions (width/height/depth)	Display (upright): Approx. 356 × 347 × 185 mm (14 1/8 × 13 3/4 × 7 3/8 inches) Media engine (without stand): Approx. 45 × 180 × 180 mm (1 13/16 × 7 1/8 × 7 1/8 inches) Media engine (with stand): Approx. 94 × 185 × 180 mm (3 3/4 × 7 3/8 × 7 1/8 inches)
Mass	Display: Approx. 2.7 kg (5 lb 15 oz) Media engine (with stand): Approx. 0.85 kg (1 lb 14 oz)
Plug & Play	DDC1/DDC2B/DDC2Bi
Accessories	See page 8.

* Recommended horizontal and vertical timing condition
- Horizontal sync width duty should be more than 4.8% of total horizontal time or 0.8 µs, whichever is larger.
- Horizontal blanking width should be more than 2.3 µsec.
- Vertical blanking width should be more than 450 µsec.

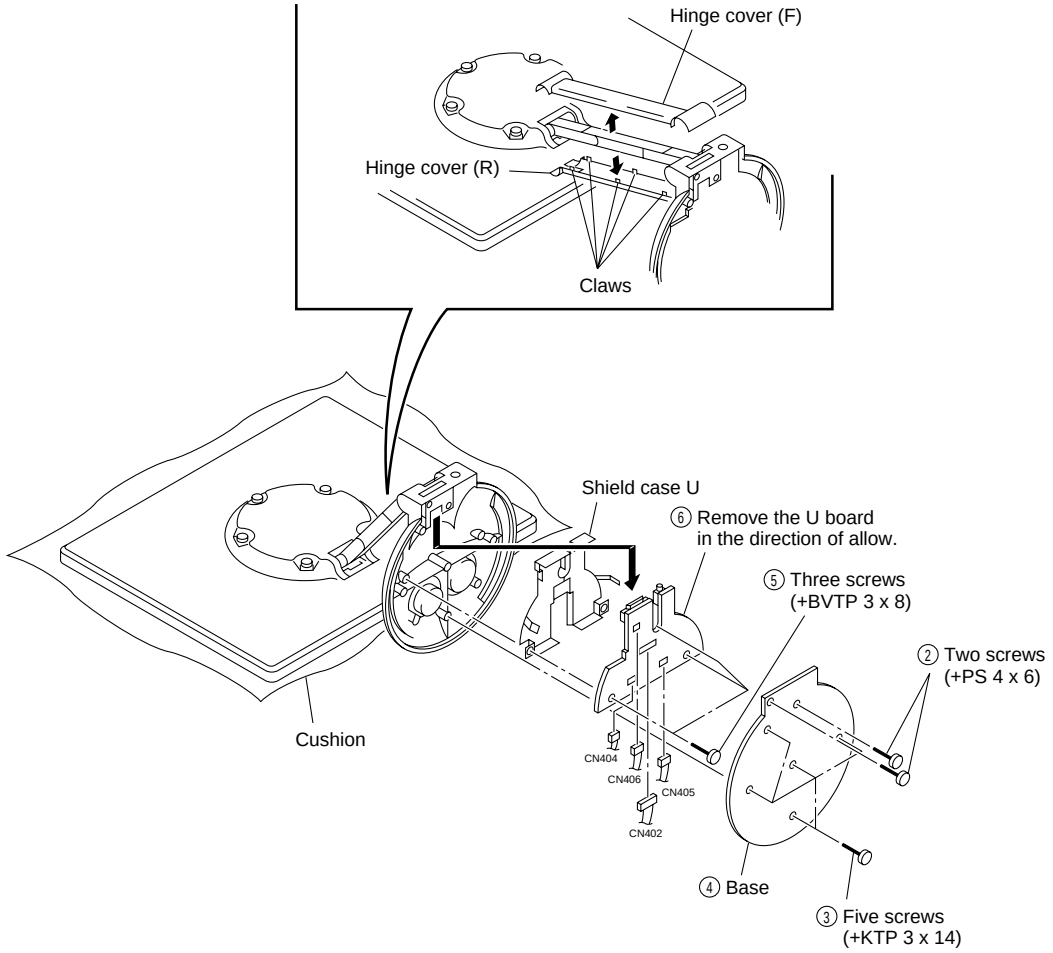
Design and specifications are subject to change without notice.

SECTION 2
DISASSEMBLY

2-1. U BOARD REMOVAL

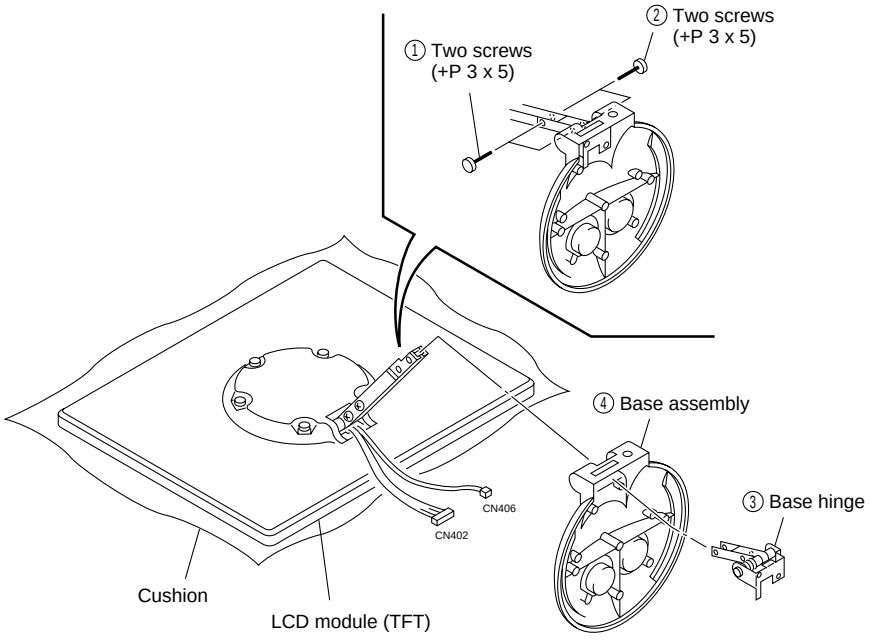
① Open these hinge covers (F) and (R) by the ⊖ screw driver and so on.

* When open the hinge cover (R), these claws in figure would be break so replace new parts.

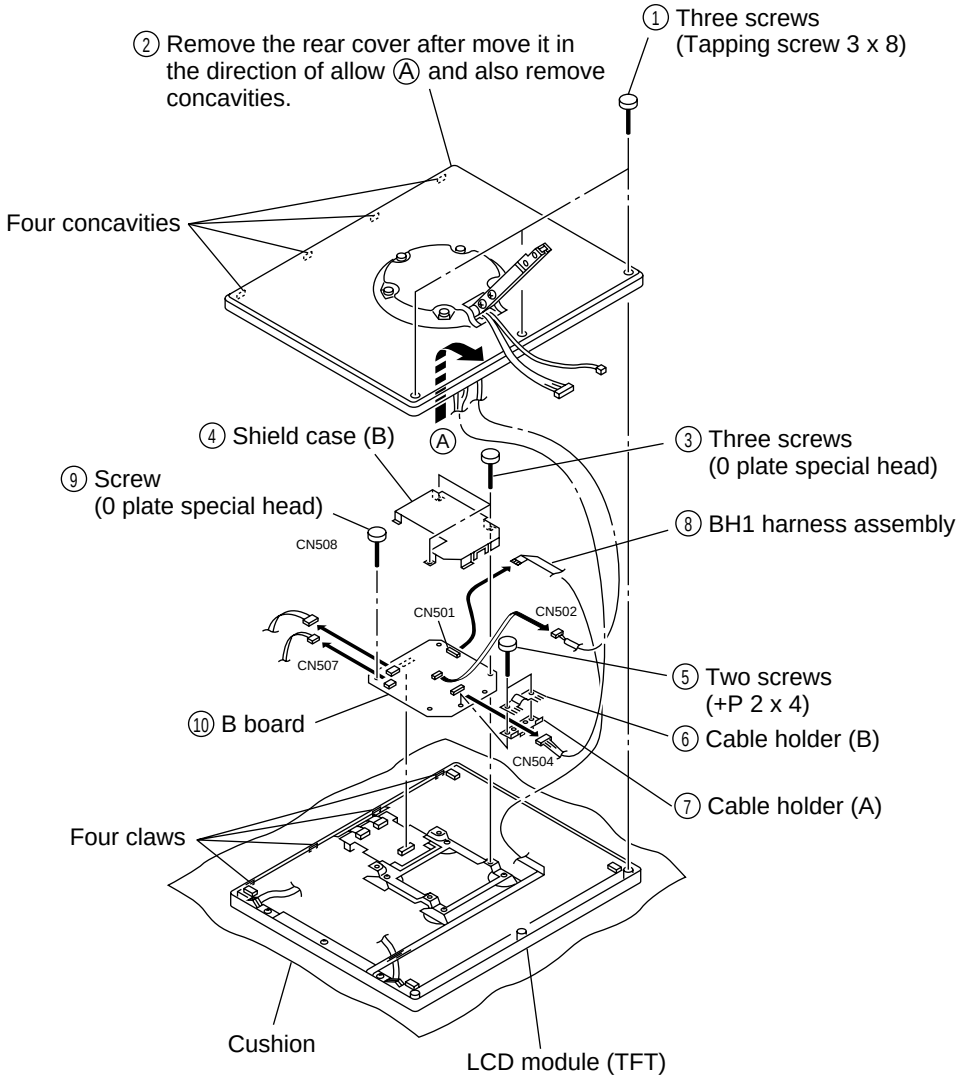


2-2. BASE ASSEMBLY REMOVAL

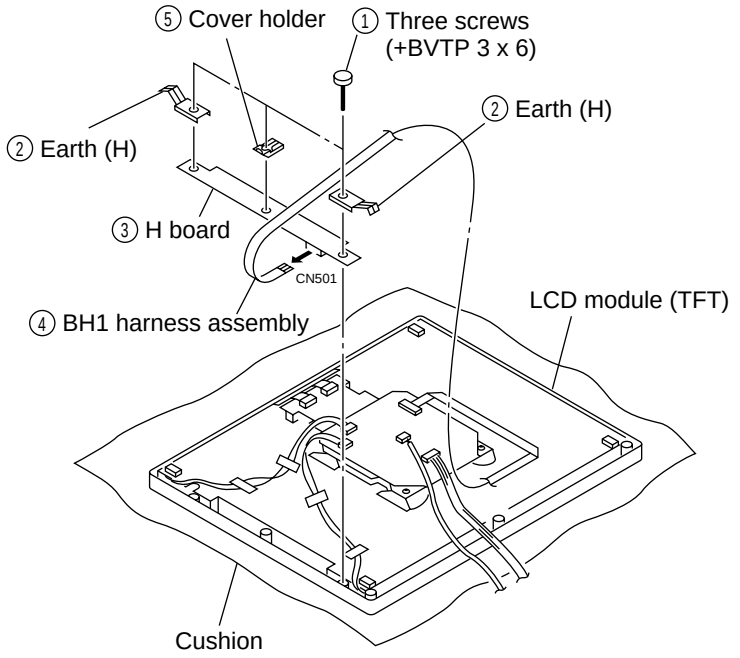
* Remove the U board refering 2-1.



2-3. B BOARD REMOVAL

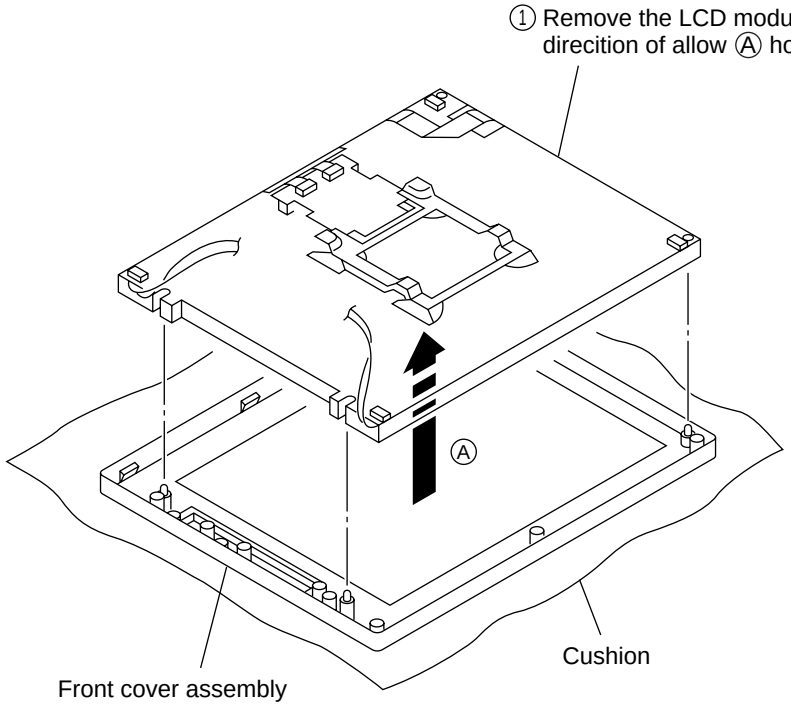


2-4. H BOARD REMOVAL

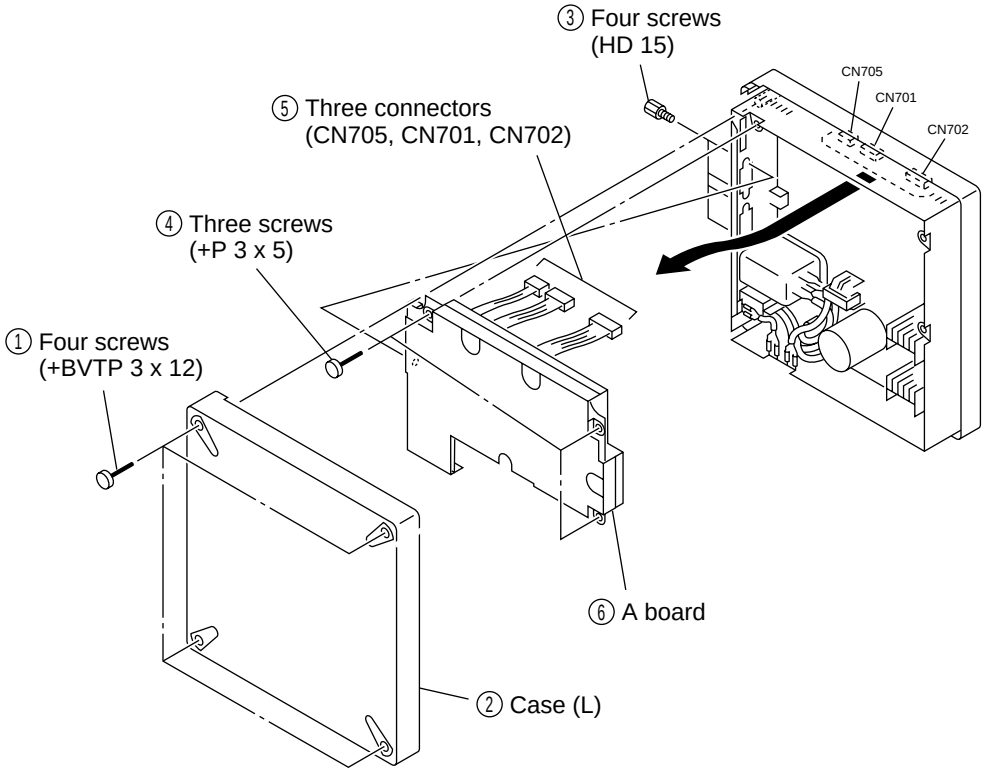


2-5. LCD MODULE (TFT) REMOVAL

* Remove the B and H boards refering 2-3 and 2-4.

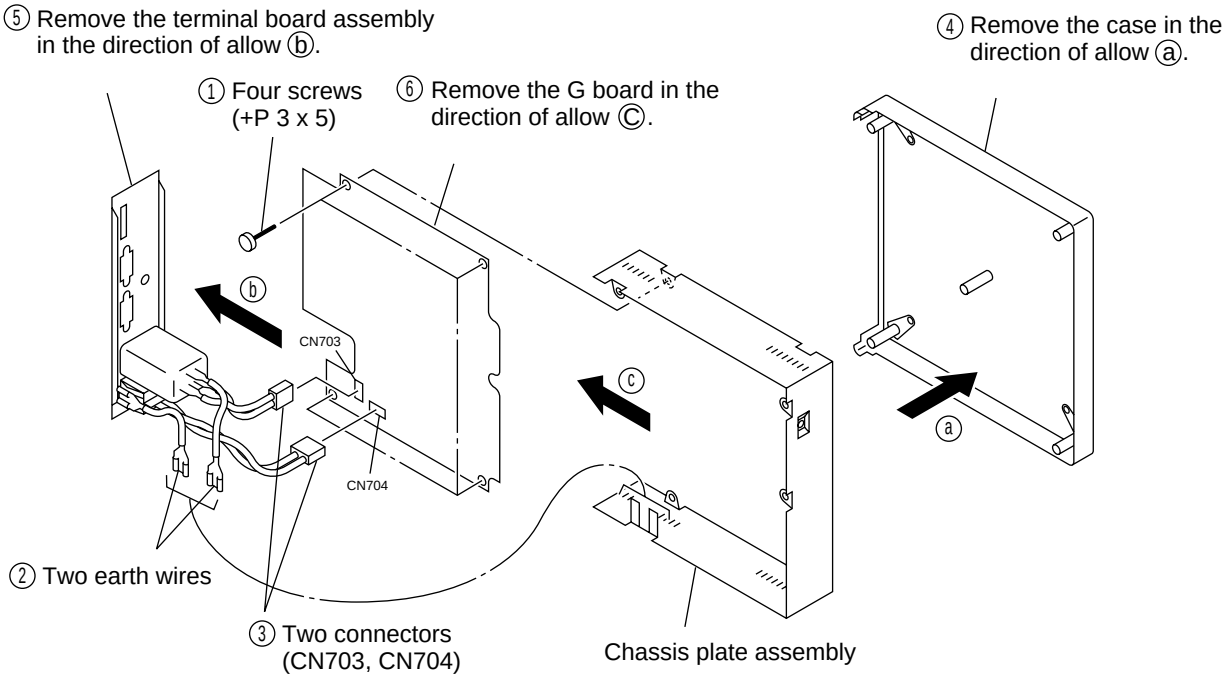


2-6. A BOARD REMOVAL



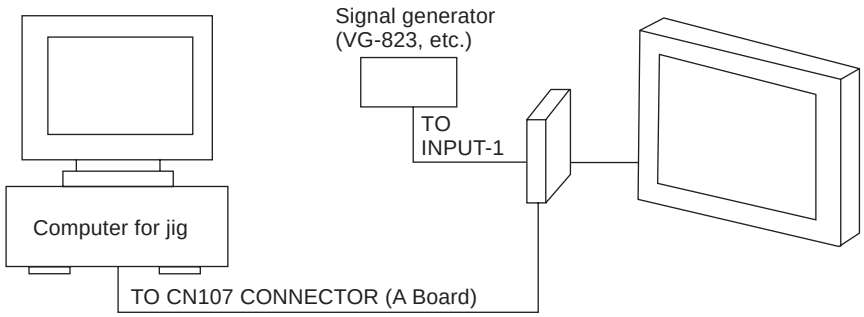
2-7. G BOARD REMOVAL

* Remove A board refering 2-6.



SECTION 3
ADJUSTMENTS

Connect the personal computer, monitor, and signal generator as shown below, and control the monitor.



* Maintain the Aging mode for over 30 minutes.

- **Preset mode adjustment**

Confirm the screen by below three kinds of the modes within preseted frequency.

Signal mode

1. MODE 0 (640X480 60Hz)
2. MODE 10 (800X600 75Hz)
3. MODE 17 (1024X768 75Hz)

(1) Input a cross hatch signal.
(2) Confirm both edges can see or white lines of edges are not separating from indicated area edges.
Errors in the range of 2dot are permit.
Be saticefy one of both edges that is within above specification.

- **White balance adjustment**

When no measuring instrument is used, compare the color with the reference set so that the colors will be the same.

1. Adjustment of 9300°K

(1) Confirm every R/G/B_USER_BKG are initialized value.
(2) Receive MODE 15 (1024X768 60Hz) 80IRE.
Set COLOR to 9300°K. (COLOR_INDEX=1)
(3) Make adjustment with R/G_USR_DRV to set the chromaticity within the specification.
y adjustment ..... Make adjustment with B_USR_DRV.
(Also x value changes simultaneous)
B_USR_DRV UP Values x and y decrease.
B_USR_DRV DOWN Values x and y increase.
x adjustment ..... Make adjustment with R_USR_DRV.
R_USR_DRV UP Value y increases.
R_USR_DRV DOWN Value y decreases.
Adjust again and bring down G_USR_DRV 10 STEP to become within the specification ; however, in case of adjustment range of y value become deficientlly and when B_USR_DRV=255.
(4) Make the signal 30IRE all white to check that it is within the specification.
(5) Adjust R/B_USER_BKG to become within the specification when (4) deviates the specification.
(6) Input a grayscale and perform picture quality confirmation.
(7) Perform color save (select C with ALT+M).
Spec: 9300°K 80IRE (x, y) = (0.285, 0.294)
Within 3JND
9300°K 30IRE (x, y) = (0.265, 0.268)
Within 4JND
Note: Make adjustment up to ±0.002.

2. Adjustment of 6500°K

(1) Confirm every R/G/B_USER_BKG are initialized value.
(2) Receive MODE 15 (1024X768 60Hz) 80IRE.
Set COLOR to 6500°K. (COLOR_INDEX=2)
(3) Make adjustment with R/G_USR_DRV to set the chromaticity within the specification.
y adjustment ..... Make adjustment with B_USR_DRV.
(Also x value changes simultaneous)
B_USR_DRV UP Values x and y decrease.
B_USR_DRV DOWN Values x and y increase.
x adjustment ..... Make adjustment with R_USR_DRV.
R_USR_DRV UP Value y increases.
R_USR_DRV DOWN Value y decreases.
Adjust again and bring down G_USR_DRV 10 STEP to become within the specification ; however, in case of adjustment range of y value become deficientlly and when B_USR_DRV=255.
(4) Make the signal 30IRE all white to check that it is within the specification.
(5) Adjust R/B_USER_BKG to become within the specification when (4) deviates the specification.
(6) Input a grayscale and perform picture quality confirmation.
(7) Perform color save (select C with ALT+M).
Spec: 6500°K 80IRE (x, y) = (0.314, 0.324)
Within 3JND
6500°K 30IRE (x, y) = (0.295, 0.305)
Within 4JND
Note: Make adjustment up to ±0.002.

3. Adjustment of 5000°K

(1) Confirm every R/G/B_USER_BKG are initialized value.

(2) Receive MODE 15 (1024X768 60Hz) 80IRE.
Set COLOR to 5000°K. (COLOR_INDEX=3)

(3) Make adjustment with R/G_USR_DRV to set the chromaticity within the specification.

y adjustment ..... Make adjustment with B_USR_DRV.
(Also x value changes simultaneous)

B_USR_DRV	UP	Values x and y decrease.
B_USR_DRV	DOWN	Values x and y increase.

x adjustment ..... Make adjustment with R_USR_DRV.

R_USR_DRV	UP	Value y increases.
R_USR_DRV	DOWN	Value y decreases.

Adjust again and bring down G_USR_DRV 10 STEP to become within the specification ; however, in case of adjustment range of y value become deficientlly and when B_USR_DRV=255.

(4) Make the signal 30IRE all white to check that it is within the specification.

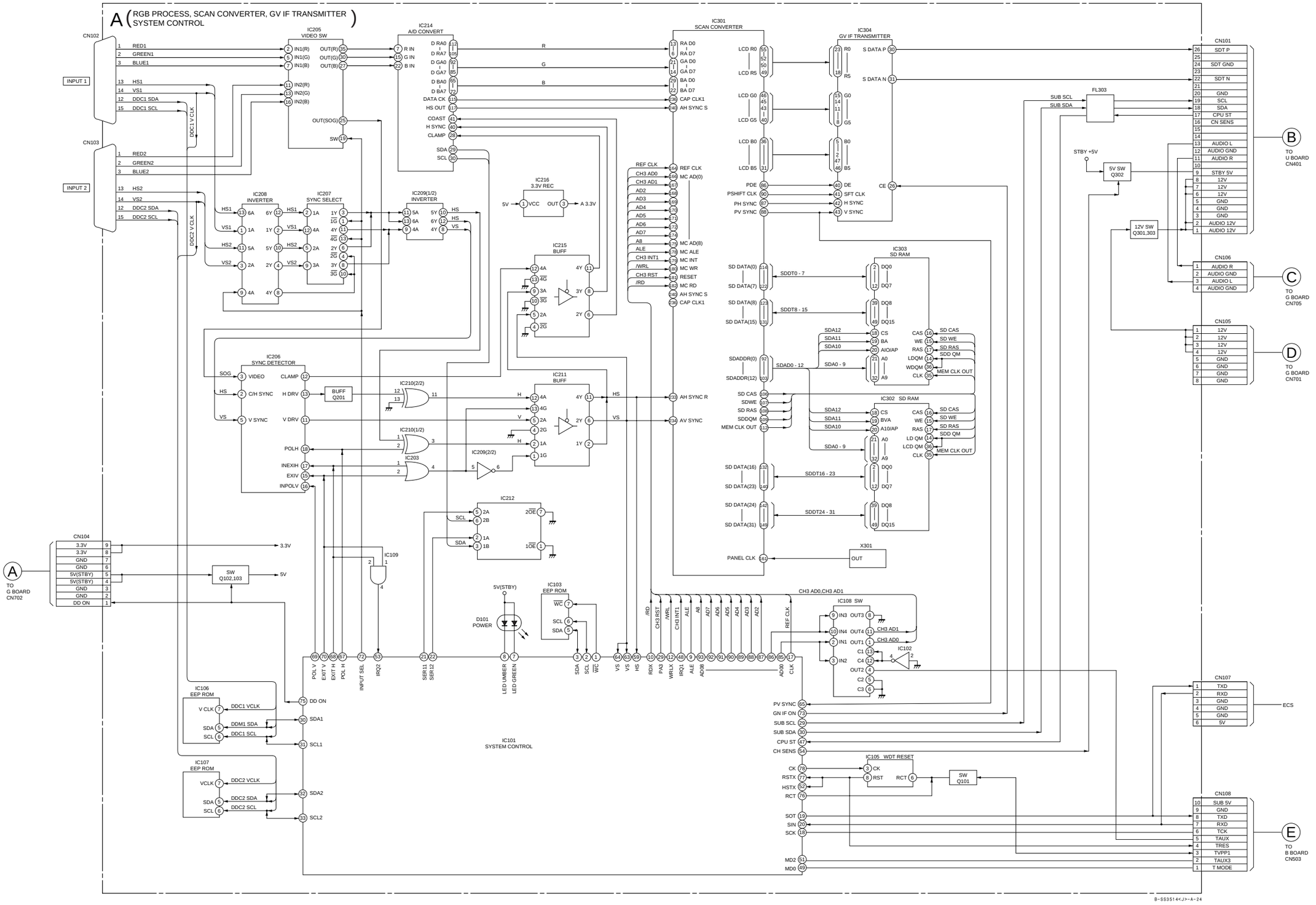
(5) Adjust R/B_USER_BKG to become within the specification when (4) deviates the specification.

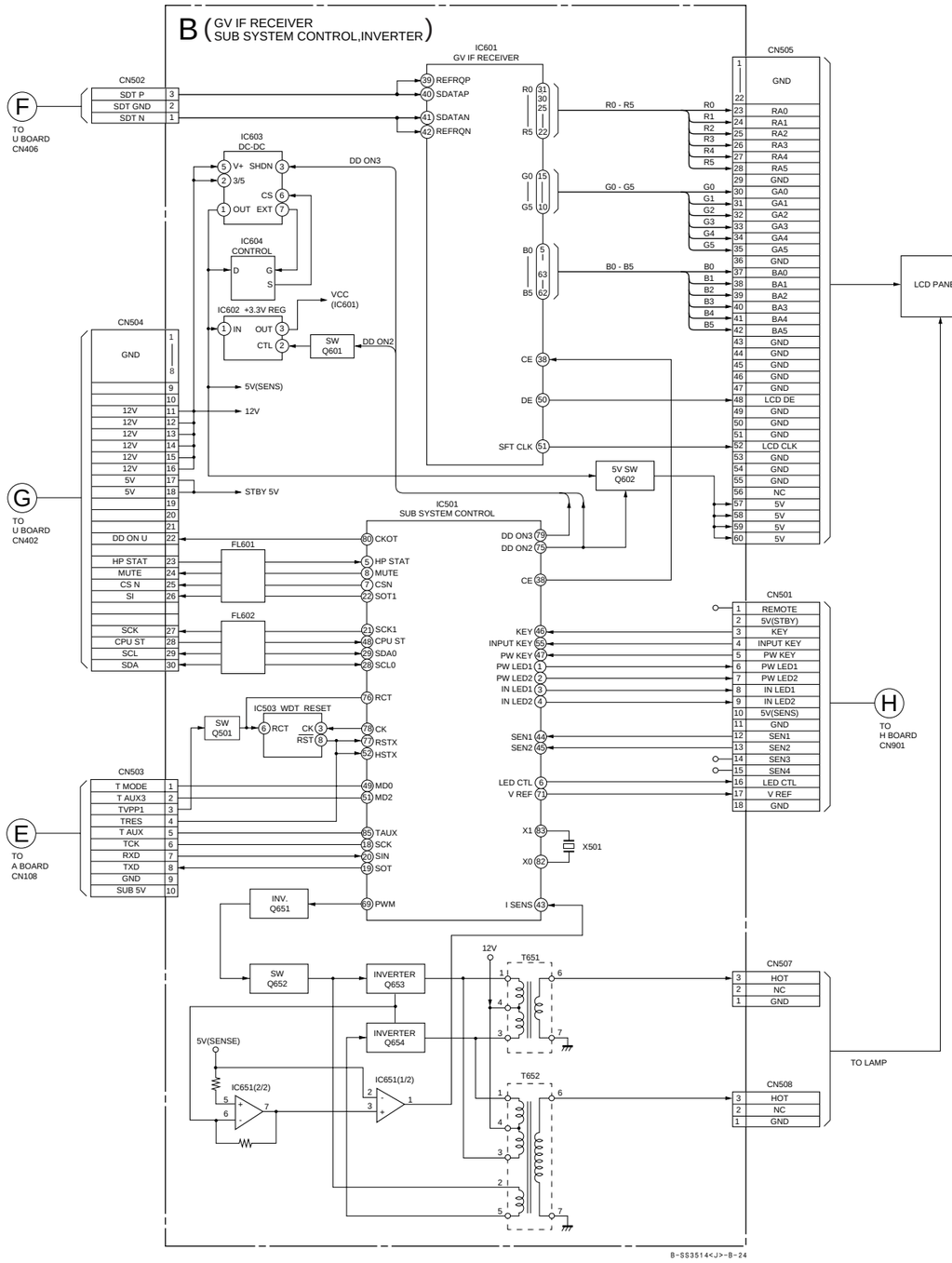
(6) Input a grayscale and perform picture quality confirmation.

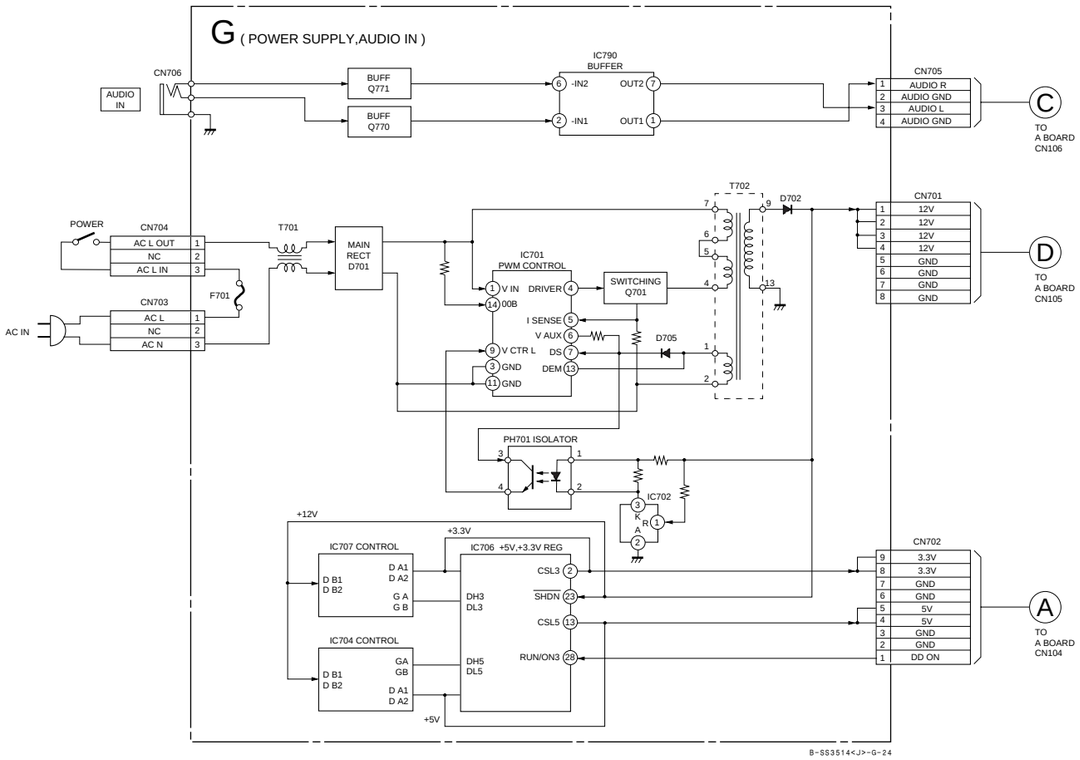
(7) Perform color save (select C with ALT+M).
Spec: 5000°K 80IRE (x, y) = (0.345, 0.352)
Within 3JND
5000°K 30IRE (x, y) = (0.322, 0.332)
Within 4JND
Note: Make adjustment up to ±0.002.position.

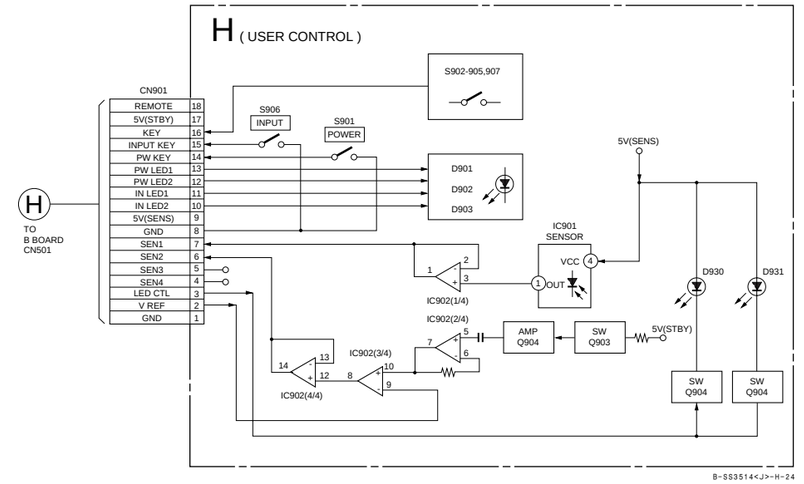
SECTION 4
DIAGRAMS

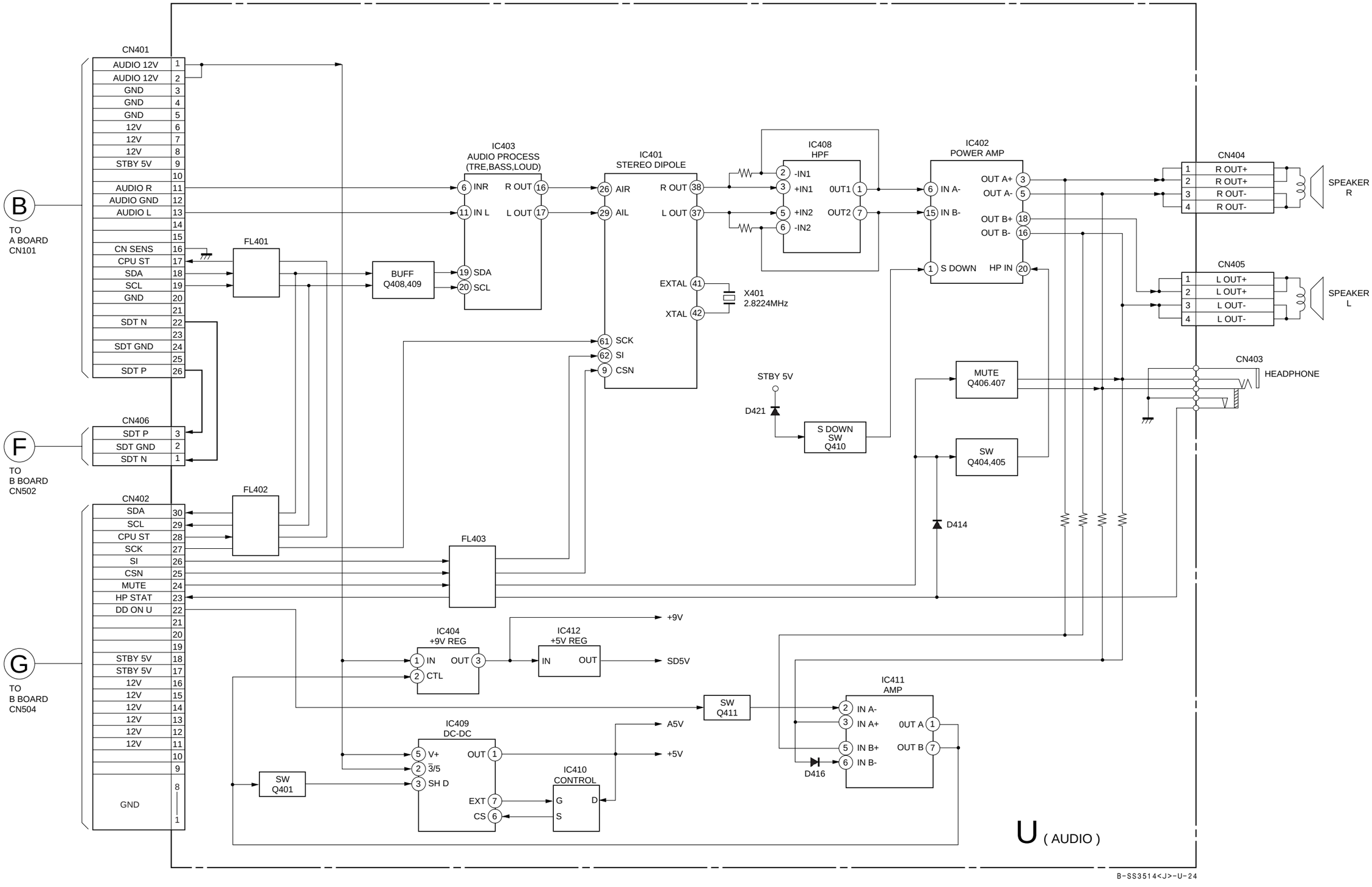
4-1. BLOCK DIAGRAMS




B (GV IF RECEIVER
SUB SYSTEM CONTROL,INVERTER)
IC601
GV IF RECEIVER
CN505
CN502
SDT P
SDT GND
SDT N
TO U BOARD CN406
REFRQP
SDATAP
SDATAN
REFRQN
R0 - R5
G0 - G5
B0 - B5
GND
RA0
RA1
RA2
RA3
RA4
RA5
GA0
GA1
GA2
GA3
GA4
GA5
BA0
BA1
BA2
BA3
BA4
BA5
LCD DE
LCD CLK
LCD PANEL
CE
DE
SFT CLK
IC603
DC-DC
V+ SHDN
3/5
CS
OUT EXT
DD ON3
IC604
CONTROL
VCC (IC601)
IC602 +3.3V REG
IN OUT
CTL
SW Q601
DD ON2
5V SW Q602
5V(SENS)
12V
STBY 5V
CN504
GND
12V
5V
DD ON U
HP STAT
MUTE
CS N
SI
SCK
CPU ST
SCL
SDA
TO U BOARD CN402
IC501
SUB SYSTEM CONTROL
CKOT
DD ON3
DD ON2
FL601
FL602
HP STAT
MUTE
CSN
SOT1
SCK1
CPU ST
SDA0
SCL0
RCT
IC503 WDT RESET
SW Q501
CK
RSTX
HSTX
CN501
REMOTE
5V(STBY)
KEY
INPUT KEY
PW KEY
PW LED1
PW LED2
IN LED1
IN LED2
5V(SENS)
SEN1
SEN2
SEN3
SEN4
LED CTL
V REF
GND
TO H BOARD CN901
CN503
T MODE
T AUX3
TVPP1
TRES
T AUX
TCK
RXD
TXD
GND
SUB 5V
TO A BOARD CN108
MD0
MD2
TAUX
SCK
SIN
SOT
X501
INV. Q651
PWM
I SENS
SW Q652
INVERTER Q653
INVERTER Q654
12V
T651
T652
IC651(1/2)
IC651(2/2)
5V(SENSE)
CN507
CN508
HOT
NC
GND
TO LAMP
B-SS3514<J>-B-24

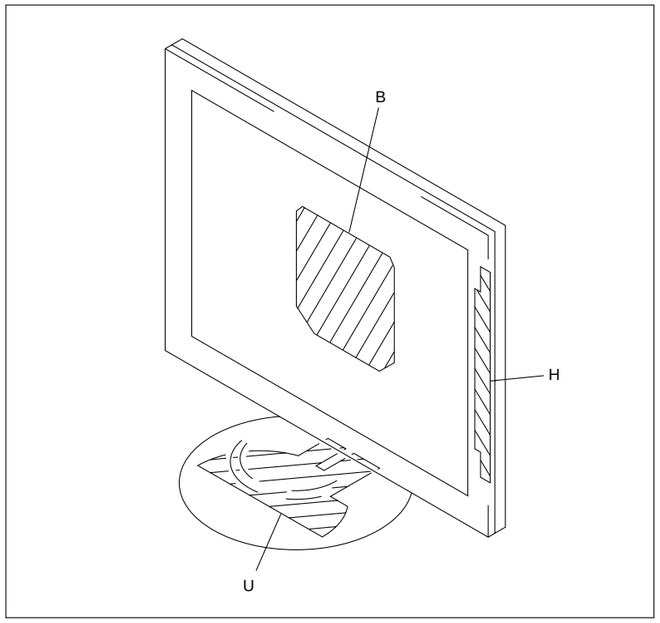

G (POWER SUPPLY,AUDIO IN)
AUDIO IN
CN706
BUFF Q771
BUFF Q770
IC790
BUFFER
-IN2
-IN1
OUT2
OUT1
CN705
AUDIO R
AUDIO GND
AUDIO L
AUDIO GND
TO A BOARD CN106
T702
D702
CN701
12V
GND
TO A BOARD CN105
POWER
CN704
AC L OUT
NC
AC L IN
AC IN
CN703
AC L
NC
AC N
F701
T701
MAIN RECT D701
IC701
PWM CONTROL
V IN
00B
DRIVER
I SENSE
V AUX
V CTR L
GND
DS
DEM
SWITCHING Q701
D705
PH701 ISOLATOR
IC702
+12V
+3.3V
IC707 CONTROL
IC706 +5V,+3.3V REG
IC704 CONTROL
D B1
D B2
D A1
D A2
G A
G B
GA
GB
DH3
DL3
DH5
DL5
CSL3
SHDN
CSL5
RUN/ON3
+5V
CN702
3.3V
5V
DD ON
TO A BOARD CN104
B-SS3514<J>-G-24


H (USER CONTROL)
CN901
REMOTE
5V(STBY)
KEY
INPUT KEY
PW KEY
PW LED1
PW LED2
IN LED1
IN LED2
5V(SENS)
GND
SEN1
SEN2
SEN3
SEN4
LED CTL
V REF
GND
TO B BOARD CN501
S902-905,907
S906
INPUT
S901
POWER
D901
D902
D903
5V(SENS)
IC901
SENSOR
VCC
OUT
IC902(1/4)
IC902(2/4)
IC902(3/4)
IC902(4/4)
AMP Q904
SW Q903
5V(STBY)
D930
D931
SW Q904
SW Q904
B-SS3514<J>-H-24

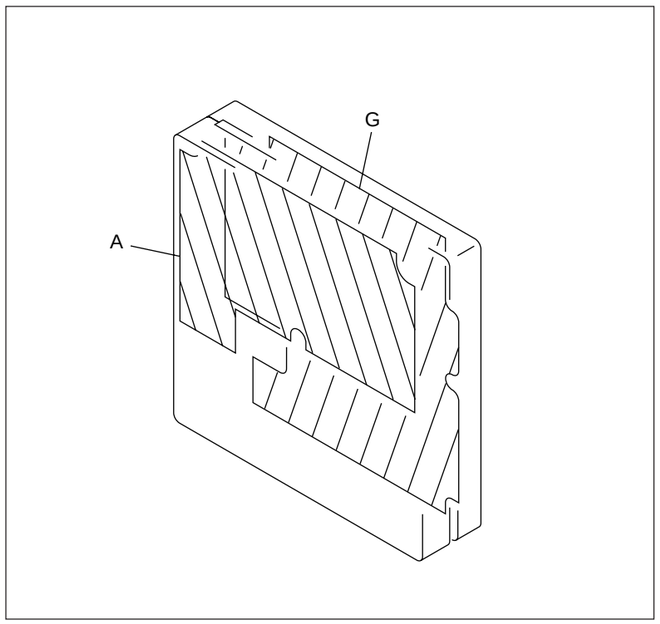

CN401
AUDIO 12V 1
AUDIO 12V 2
GND 3
GND 4
GND 5
12V 6
12V 7
12V 8
STBY 5V 9
10
AUDIO R 11
AUDIO GND 12
AUDIO L 13
14
15
CN SENS 16
CPU ST 17
SDA 18
SCL 19
GND 20
21
SDT N 22
23
SDT GND 24
25
SDT P 26
B
TO
A BOARD
CN101
CN406
SDT P 3
SDT GND 2
SDT N 1
F
TO
B BOARD
CN502
CN402
SDA 30
SCL 29
CPU ST 28
SCK 27
SI 26
CSN 25
MUTE 24
HP STAT 23
DD ON U 22
21
20
19
STBY 5V 18
STBY 5V 17
12V 16
12V 15
12V 14
12V 13
12V 12
12V 11
10
9
GND 8 1
G
TO
B BOARD
CN504
FL401
FL402
FL403
BUFF
Q408,409
IC403
AUDIO PROCESS
(TRE,BASS,LOUD)
6 INR
11 IN L
R OUT 16
L OUT 17
19 SDA
20 SCL
IC401
STEREO DIPOLE
26 AIR
29 AIL
R OUT 38
L OUT 37
EXTAL 41
XTAL 42
X401
2.8224MHz
61 SCK
62 SI
9 CSN
IC408
HPF
2 -IN1
3 +IN1
5 +IN2
6 -IN2
0UT1 1
OUT2 7
IC402
POWER AMP
6 IN A-
15 IN B-
1 S DOWN
OUT A+ 3
OUT A- 5
OUT B+ 18
OUT B- 16
HP IN 20
CN404
1 R OUT+
2 R OUT+
3 R OUT-
4 R OUT-
SPEAKER
R
CN405
1 L OUT+
2 L OUT+
3 L OUT-
4 L OUT-
SPEAKER
L
CN403
HEADPHONE
STBY 5V
D421
S DOWN
SW
Q410
MUTE
Q406.407
SW
Q404,405
D414
IC404
+9V REG
1 IN
2 CTL
OUT 3
+9V
IC412
+5V REG
IN
OUT
SD5V
SW
Q411
IC411
AMP
2 IN A-
3 IN A+
5 IN B+
6 IN B-
0UT A 1
OUT B 7
D416
IC409
DC-DC
5 V+
2 3/5
3 SH D
OUT 1
EXT 7
CS 6
A5V
+5V
SW
Q401
IC410
CONTROL
G
S
D
U (AUDIO)
B-SS3514<J>-U-24

4-2. CIRCUIT BOARDS LOCATION

DISPLAY



MEDIA ENGINE



4-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note:

- All capacitors are in µF unless otherwise noted. (pF: µµF) Capacitors without voltage indication are all 50 V.
- Indication of resistance, which does not have one for rating electrical power, is as follows.

  Pitch: 5 mm
  Rating electrical power 1/4 W (CHIP : 1/10 W)

- All resistors are in ohms.
- : nonflammable resistor.
- : fusible resistor.
- △ : internal component.
- : panel designation, and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- : earth-ground.
- : earth-chassis.
- All voltages are in V.
- Readings are taken with a 10 MΩ digital multimeter.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerances.
- ∗ : Can not be measured.
- Circled numbers are waveform references.
- : B + bus.
- : B – bus.

- Divided circuit diagram
  One sheet of A, U boards circuit diagrams are divided into two sheets, each having the code A-P1-ⓐ to A-P1-ⓑ, A-P2-ⓐ to A-P2-ⓑ, A-P3-ⓐ to A-P3-ⓑ, U-ⓐ to U-ⓑ. For example, the destination(ab1)on the A-P1-ⓐ sheet is connected to(ab1)on the A-P1-ⓑ sheet.

a b 1
- 1 → Ref. No.
- a b → Circuit diagram division code

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

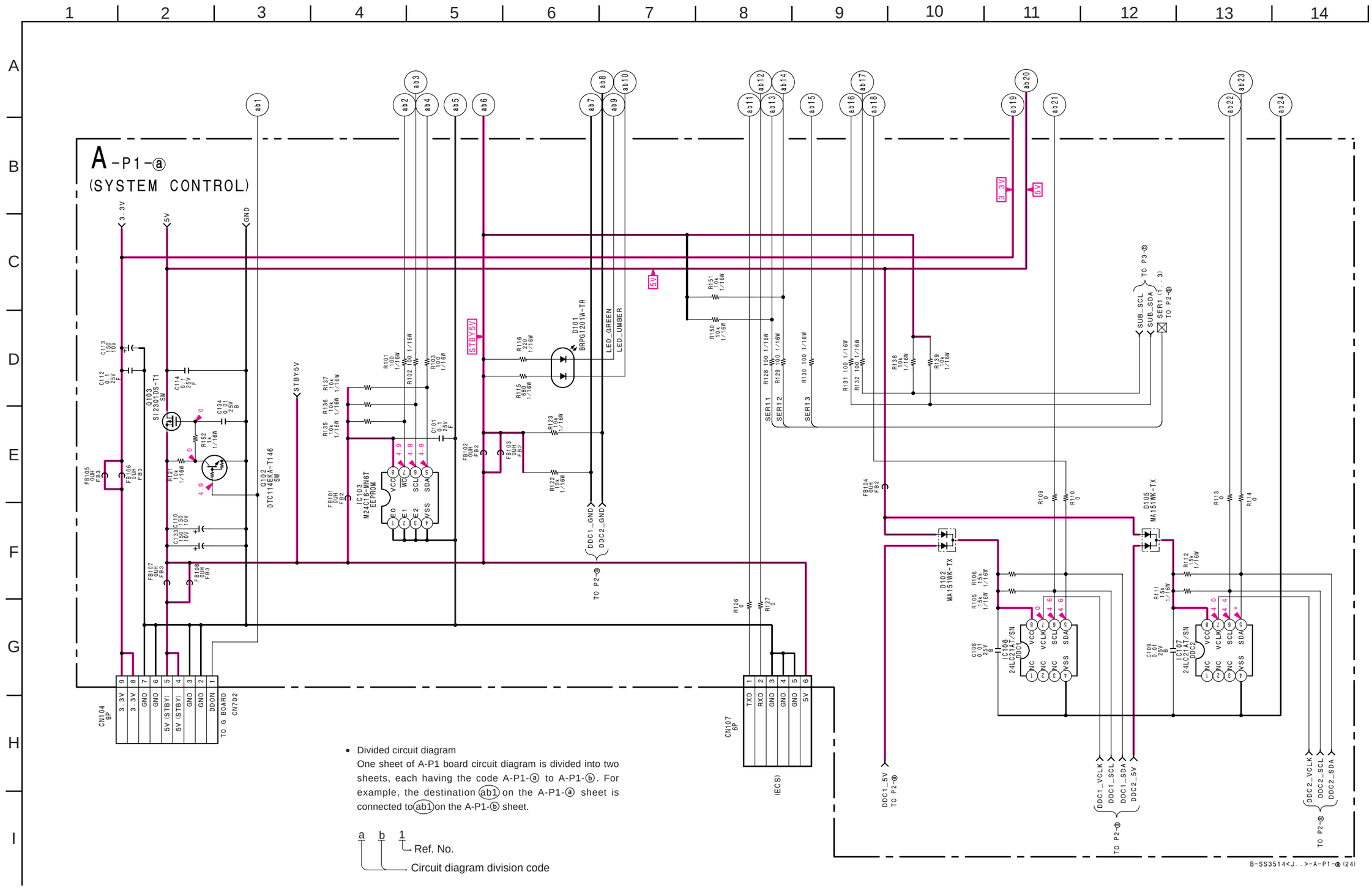
Terminal name of semiconductors in silk screen printed circuit (∗)

	Device	Printed symbol	Terminal name	Circuit
①	Transistor	T	Collector / Base Emitter	
②	Transistor	—	Collector / Base Emitter	
③	Diode		Cathode — Anode	
④	Diode	T	Cathode / Anode (NC)	
⑤	Diode	—	Cathode / Anode (NC)	
⑥	Diode	T	Common / Anode Cathode	
⑦	Diode	—	Common / Anode Cathode	
⑧	Diode	T	Common / Anode Anode	
⑨	Diode	—	Common / Anode Anode	
⑩	Diode	T	Common / Cathode Cathode	
⑪	Diode	—	Common / Cathode Cathode	
⑫	Diode	|	Anode Anode Cathode / Cathode Anode Anode	
⑬	Transistor (FET)	|	Drain Source / Gate	
⑭	Transistor (FET)	⊢	Drain Source / Gate	
⑮	Transistor (FET)	|	□ Source □ Drain □ Gate	
–	Discrete semiconductot			

(Chip semiconductors that are not actually used are included.)

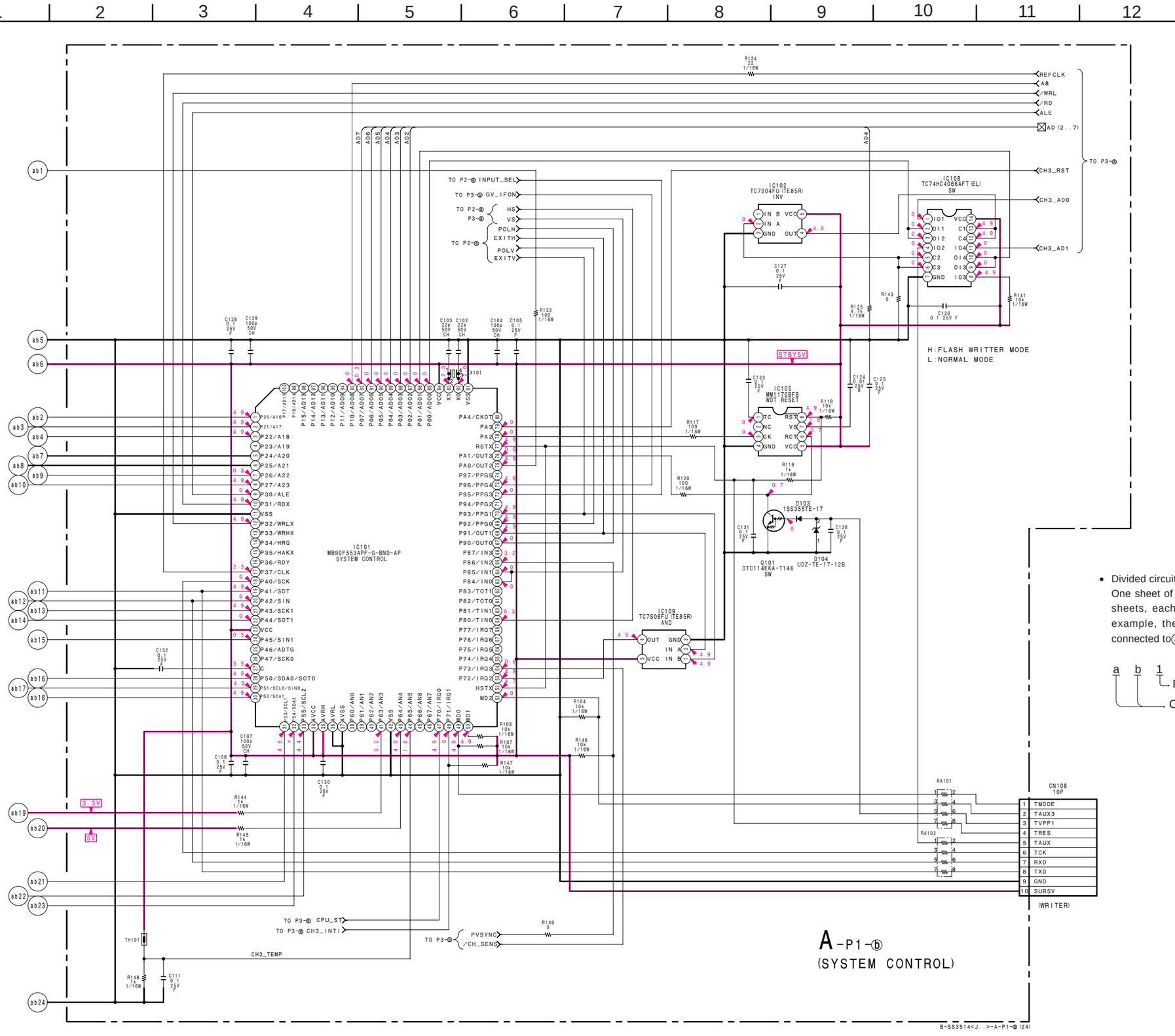
Ver.1.6

Note: Les composants identifiés per un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



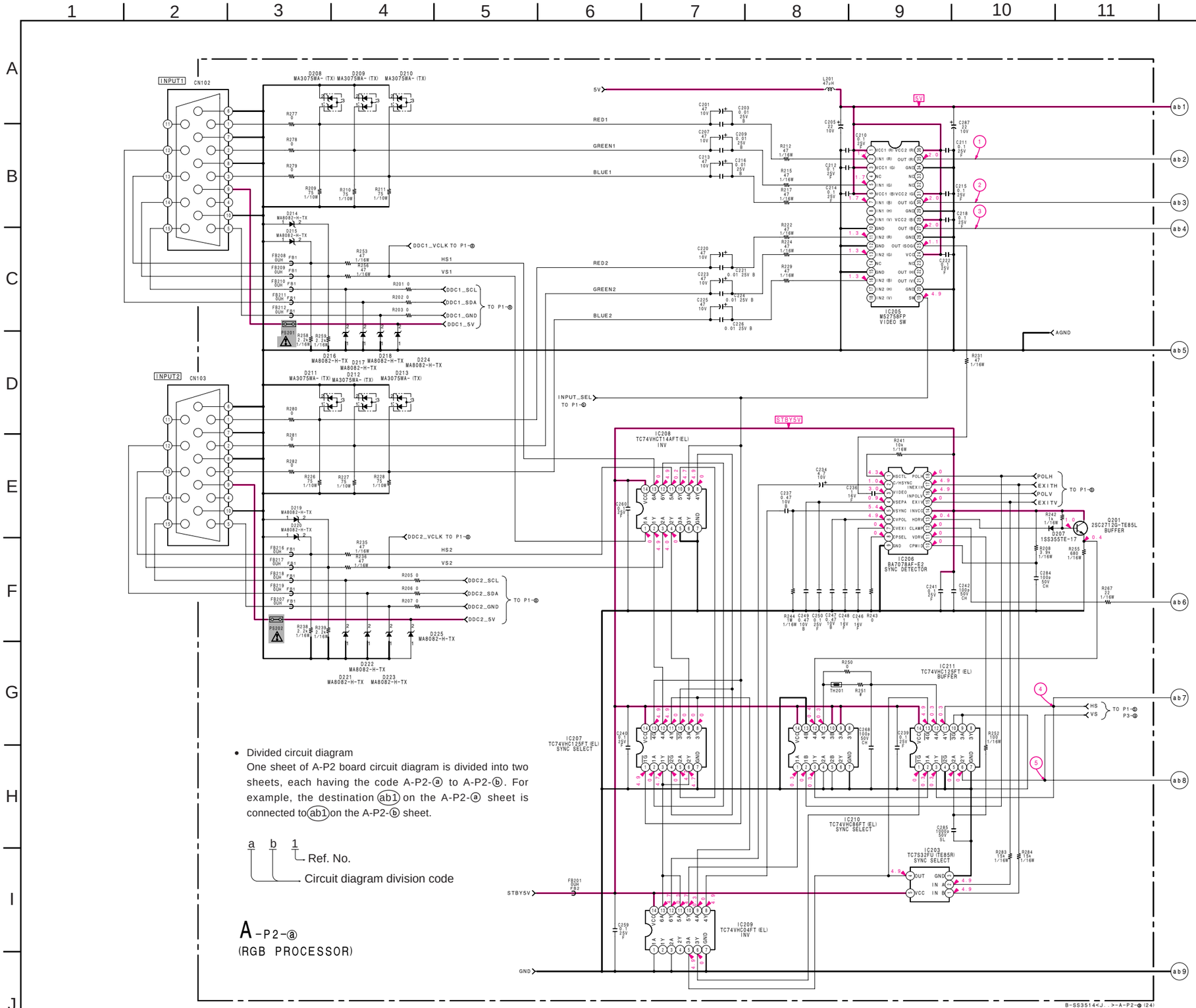
- Divided circuit diagram
  One sheet of A-P1 board circuit diagram is divided into two sheets, each having the code A-P1-ⓐ to A-P1-ⓑ. For example, the destination (ab1) on the A-P1-ⓐ sheet is connected to (ab1) on the A-P1-ⓑ sheet.

a b 1
- 1: Ref. No.
- a b: Circuit diagram division code



- Divided circuit diagram
  One sheet of A-P1 board circuit diagram is divided into two sheets, each having the code A-P1-ⓐ to A-P1-ⓑ. For example, the destination (ab1) on the A-P1-ⓐ sheet is connected to (ab1) on the A-P1-ⓑ sheet.

a b 1
- 1: Ref. No.
- a b: Circuit diagram division code



- Divided circuit diagram
  One sheet of A-P2 board circuit diagram is divided into two sheets, each having the code A-P2-ⓐ to A-P2-ⓑ. For example, the destination (ab1) on the A-P2-ⓐ sheet is connected to (ab1) on the A-P2-ⓑ sheet.

a b 1
- 1 — Ref. No.
- a b — Circuit diagram division code

- **A - P2-ⓐ BOARD WAVEFORMS**

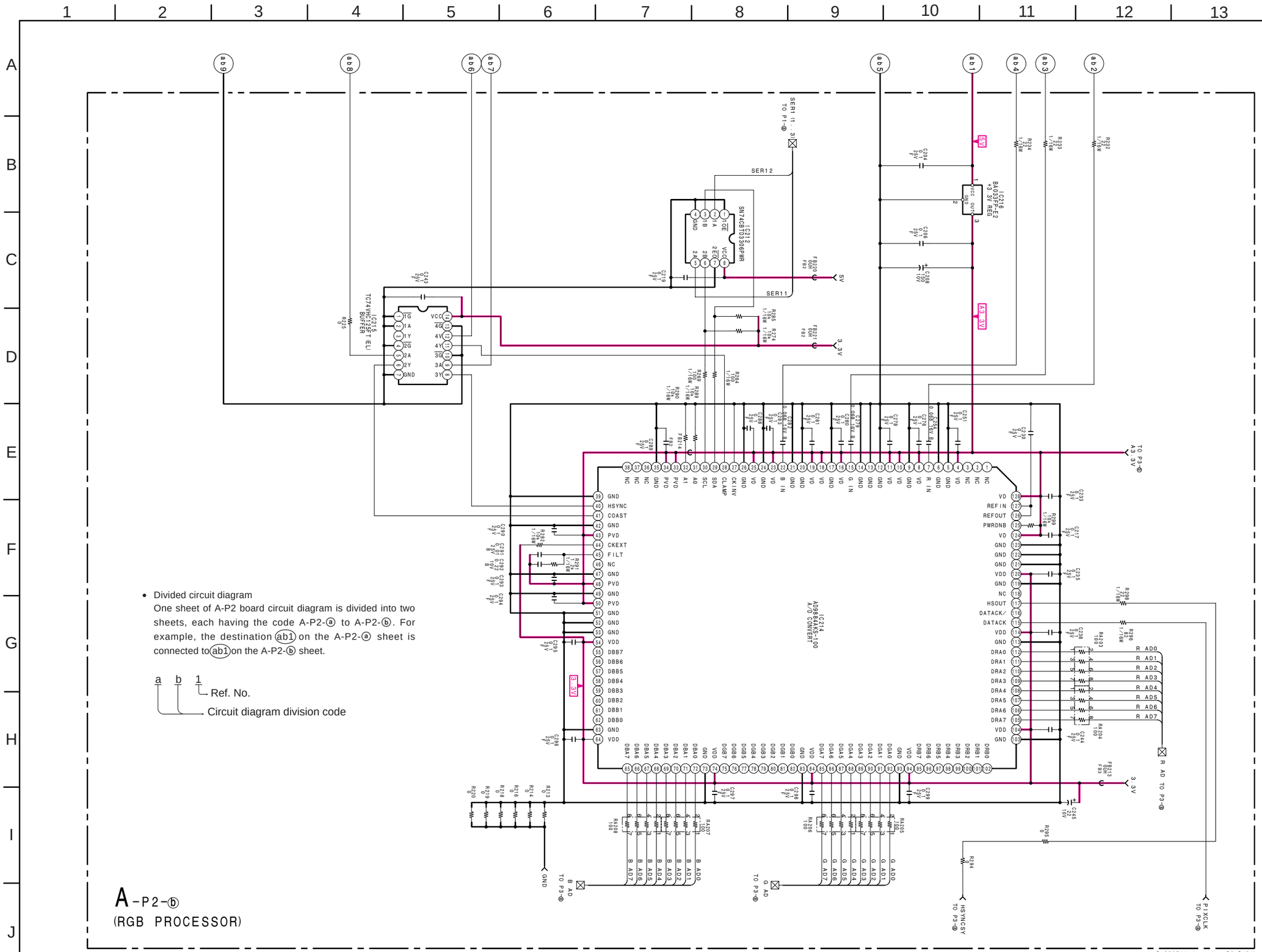
① 0.8 Vp-p (H)

② 1.0 Vp-p (H)

③ 0.8 Vp-p (H)

④ 5.0 Vp-p (H)

⑤ 5.0 Vp-p (V)

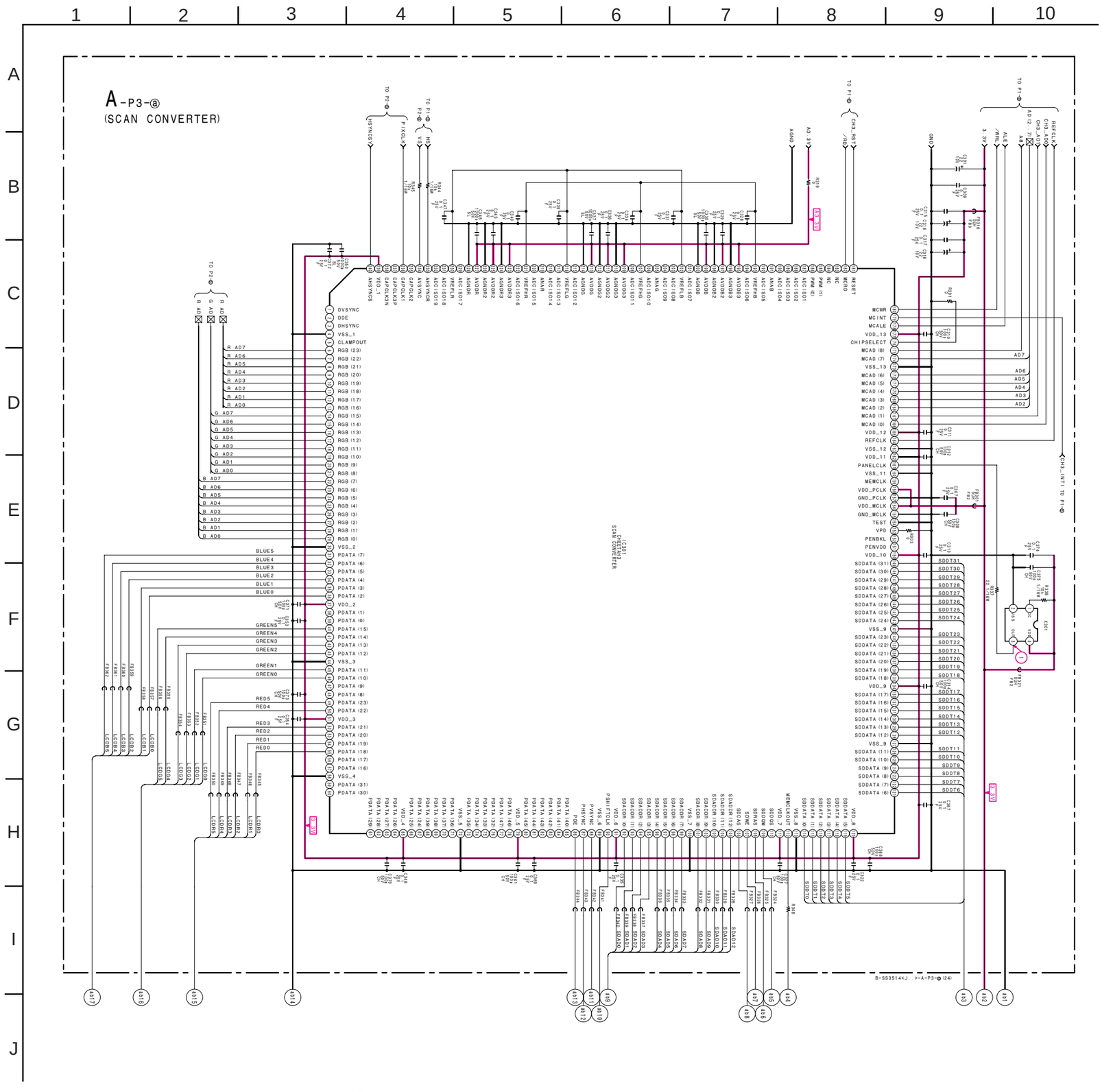


- Divided circuit diagram
  One sheet of A-P2 board circuit diagram is divided into two sheets, each having the code A-P2-ⓐ to A-P2-ⓑ. For example, the destination (ab1) on the A-P2-ⓐ sheet is connected to (ab1) on the A-P2-ⓑ sheet.

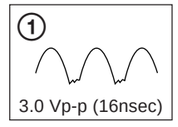
a b 1
- 1 — Ref. No.
- a — Circuit diagram division code
- b — Circuit diagram division code

A-P2-ⓑ
(RGB PROCESSOR)

B-SS3514<J..>-A..-P2-ⓑ (24)

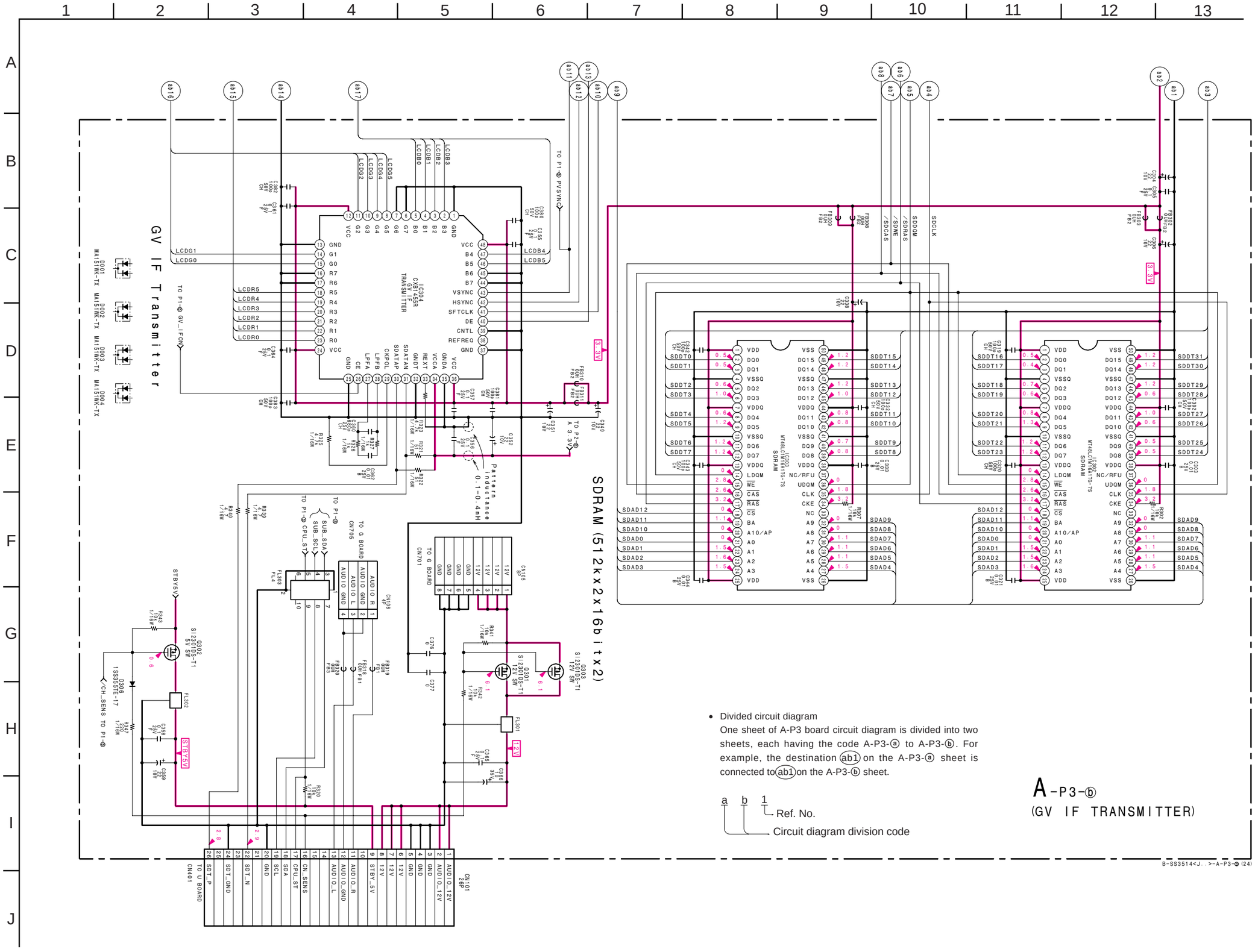


- **A - P3-ⓐ BOARD WAVEFORMS**



- Divided circuit diagram
  One sheet of A-P3 board circuit diagram is divided into two sheets, each having the code A-P3-ⓐ to A-P3-ⓑ. For example, the destination ab1 on the A-P3-ⓐ sheet is connected to ab1 on the A-P3-ⓑ sheet.

a b 1
- 1 — Ref. No.
- a b — Circuit diagram division code



- Divided circuit diagram
  One sheet of A-P3 board circuit diagram is divided into two sheets, each having the code A-P3-ⓐ to A-P3-ⓑ. For example, the destination (ab1) on the A-P3-ⓐ sheet is connected to (ab1) on the A-P3-ⓑ sheet.

a b 1
- 1 — Ref. No.
- a b — Circuit diagram division code

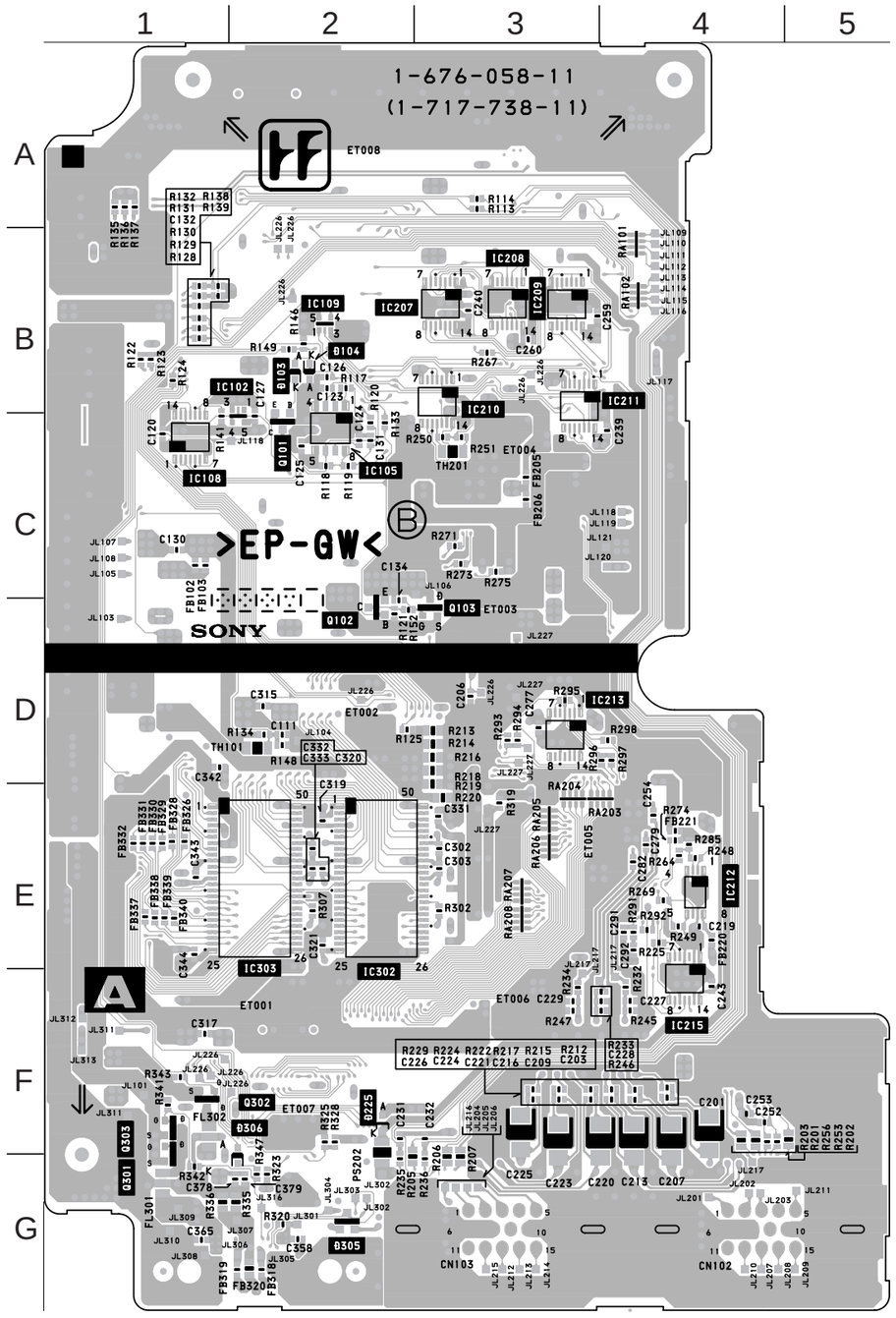
A-P3-ⓑ
(GV IF TRANSMITTER)

B-SS3514<J..>-A-P3-ⓑ(24)

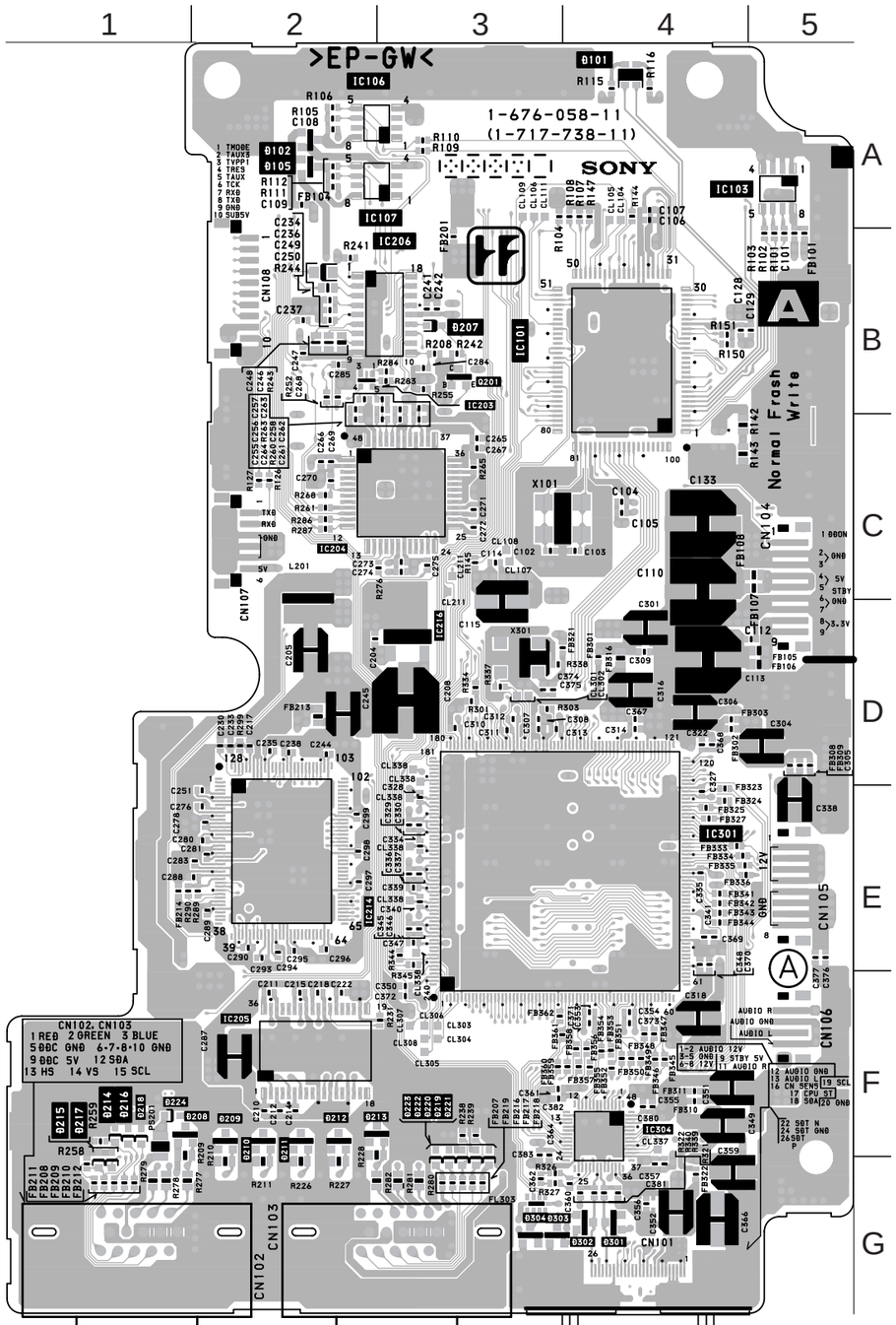
A

[RGB PROCESS, SCAN CONVERTER, GVIF TRANSMITTER, SYSTEM CONTROL]

— A BOARD (Conductor Side) —



— A BOARD (Component Side) —



- **A BOARD SEMICONDUCTOR LOCATION**

IC

	(Conductor Side)	(Component Side)
IC101		B–4
IC102	B–1	
IC103		A–4
IC105	C–2	
IC106	A–2	
IC107	A–2	
IC108	C–1	
IC109	B–2	
IC203	B–3	
IC205		F–2
IC206		B–2
IC207	B–3	
IC208	B–3	
IC209	B–3	
IC210	B–3	
IC211	B–4	
IC212	E–4	
IC214		E–2
IC215	F–4	
IC216		D–3
IC301		E–4
IC302	E–2	
IC303	E–2	
IC304		F–4

TRANSISTOR

	(Conductor Side)	(Component Side)	*
Q101	C–2		②
Q102	D–2		②
Q103	D–3		⑬
Q201		B–3	②
Q301	G–1		⑬
Q302	F–2		⑬
Q303	F–1		⑬

DIODE

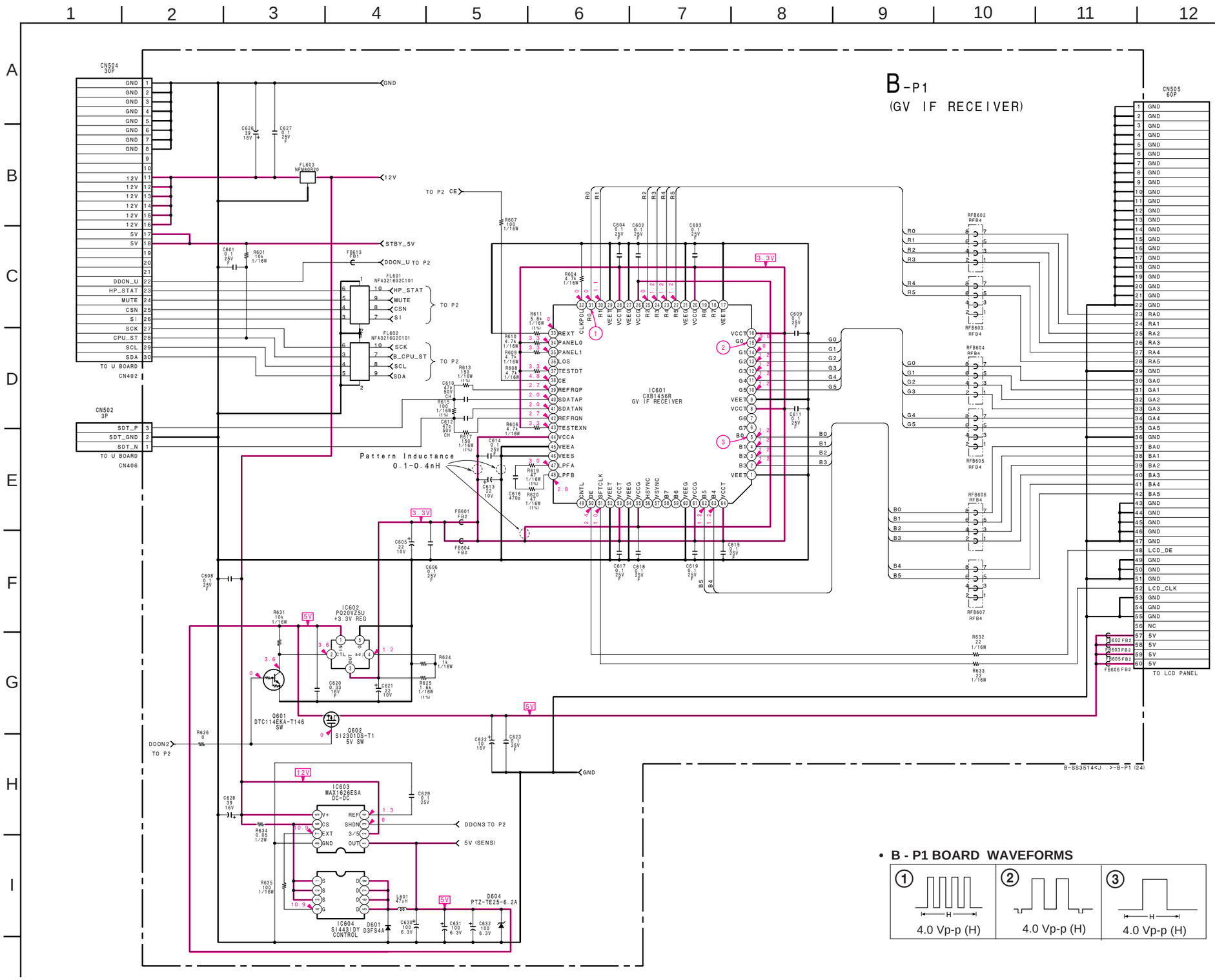
	(Conductor Side)	(Component Side)	*
D101		A–4	–
D102		A–2	⑨
D103	B–2		③
D104	B–2		③
D105		A–2	⑨
D207		B–3	③
D208		F–1	⑪
D209		F–2	⑪
D210		F–2	⑪
D211		F–2	⑪
D212		F–2	⑪
D213		F–2	⑪
D214		F–1	③
D215		F–1	③
D216		F–1	③
D217		F–1	③
D218		F–1	③
D219		F–3	③
D220		F–3	③
D221		F–3	③
D222		F–3	③
D223		F–3	③
D224		F–1	③
D225	F–2		③
D306	F–2		③

CLYSTAL

	(Conductor Side)	(Component Side)
X101		C–3
X301		D–3

∗: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 4-8)

(2) Schematic Diagrams of B (P1-P3) Boards

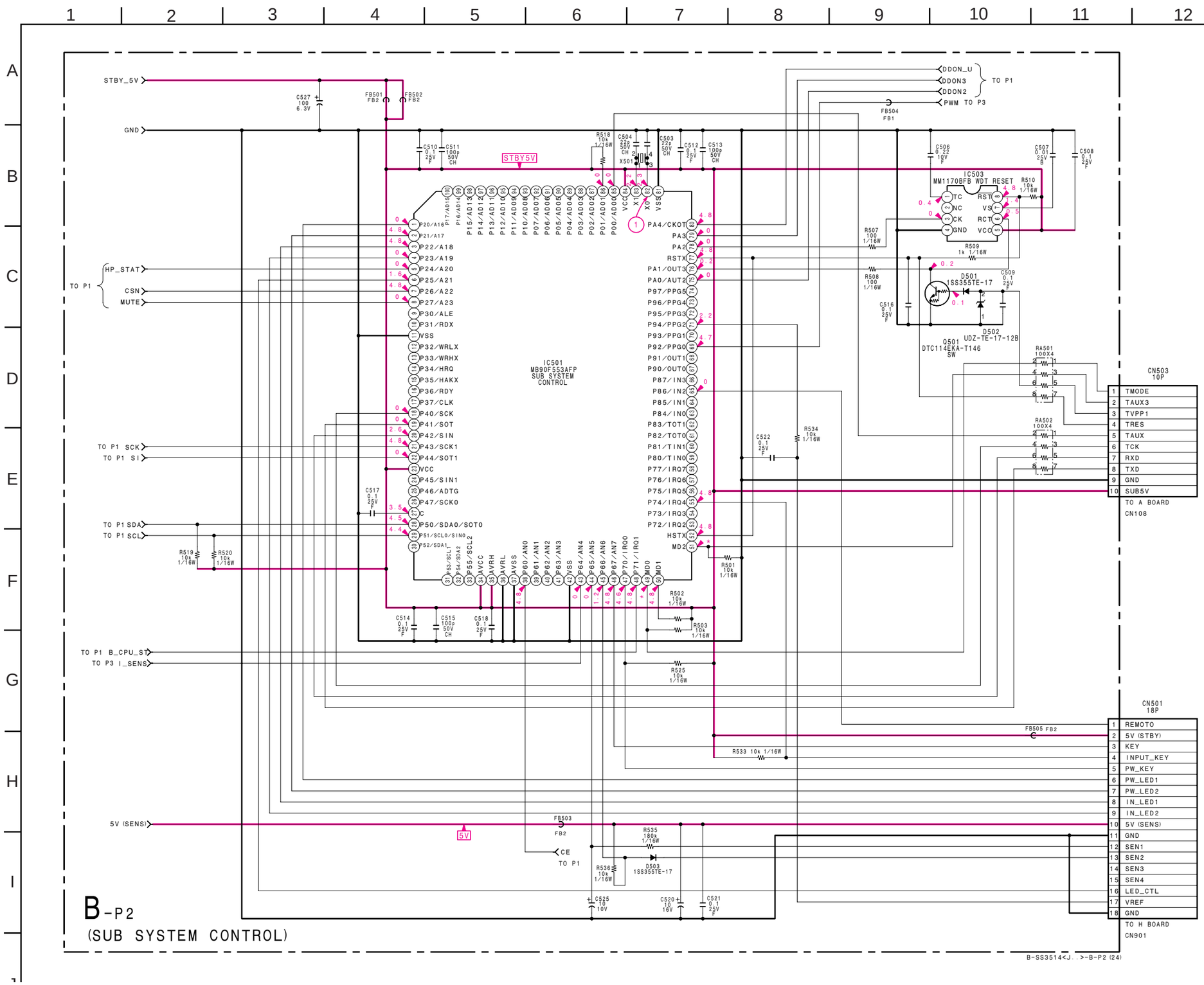


- **B - P1 BOARD WAVEFORMS**

①	②	③
4.0 Vp-p (H)	4.0 Vp-p (H)	4.0 Vp-p (H)

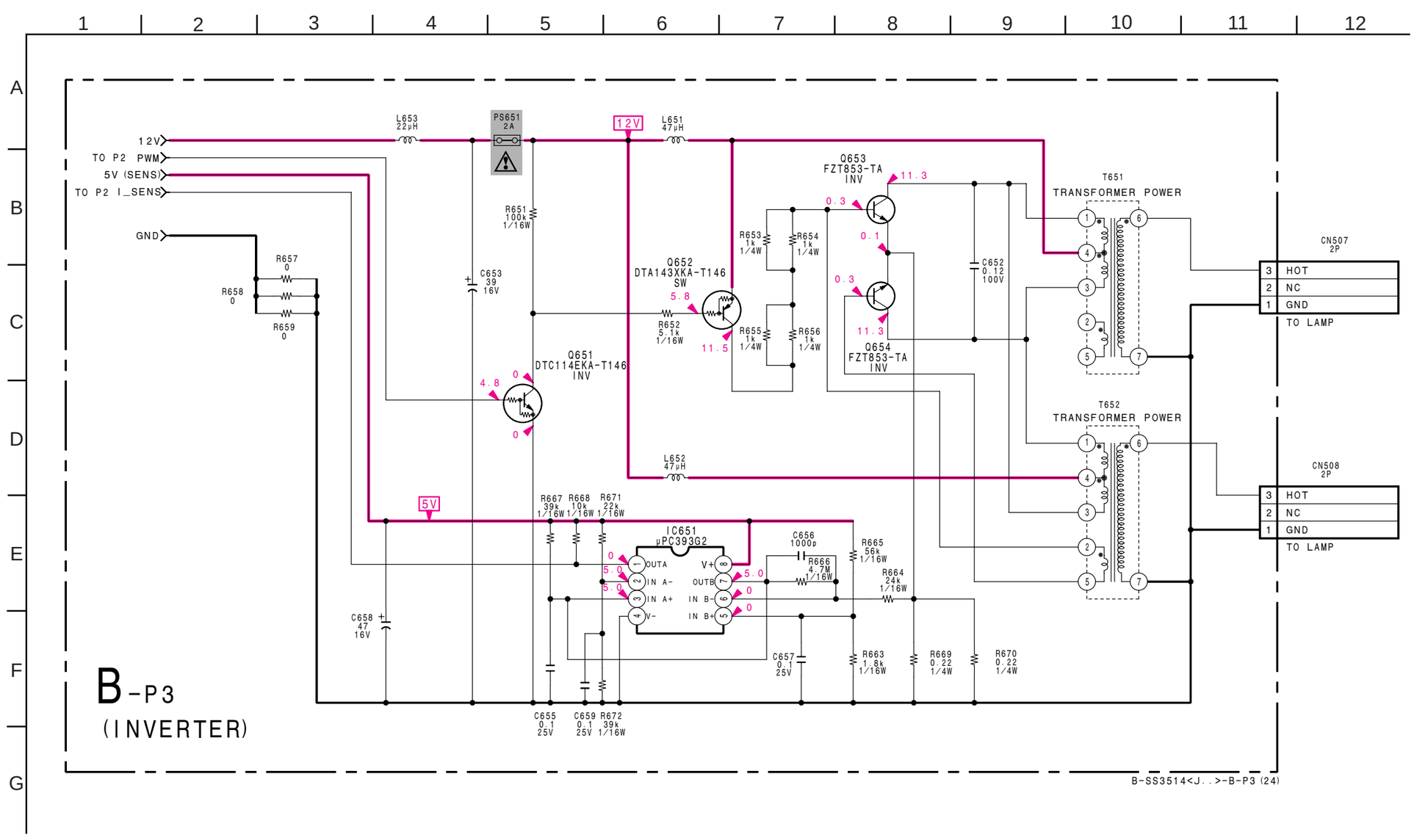
Schematic diagram

B -P1 board ➡

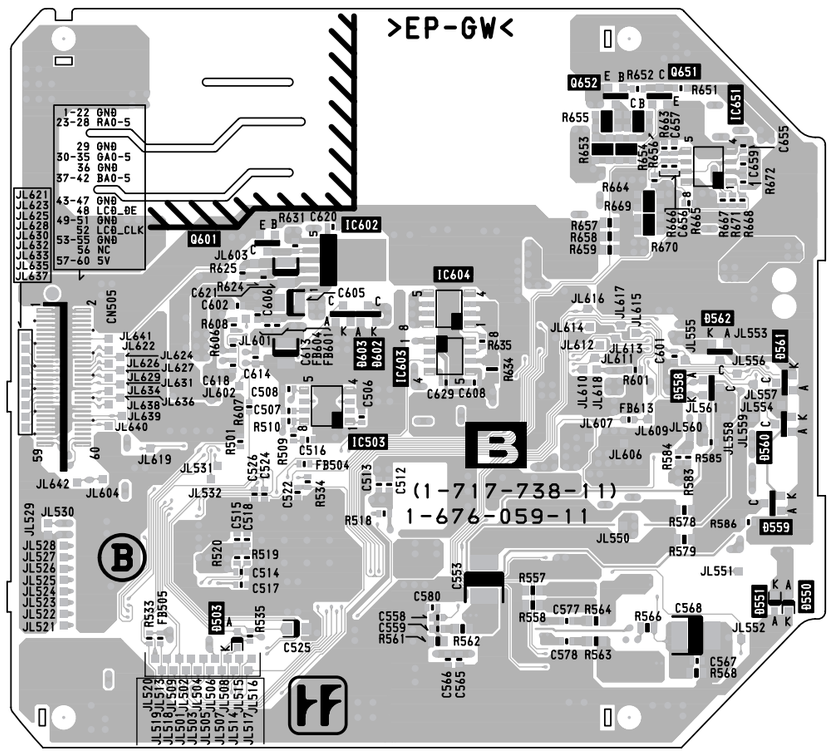


- **B - P2 BOARD WAVEFORMS**

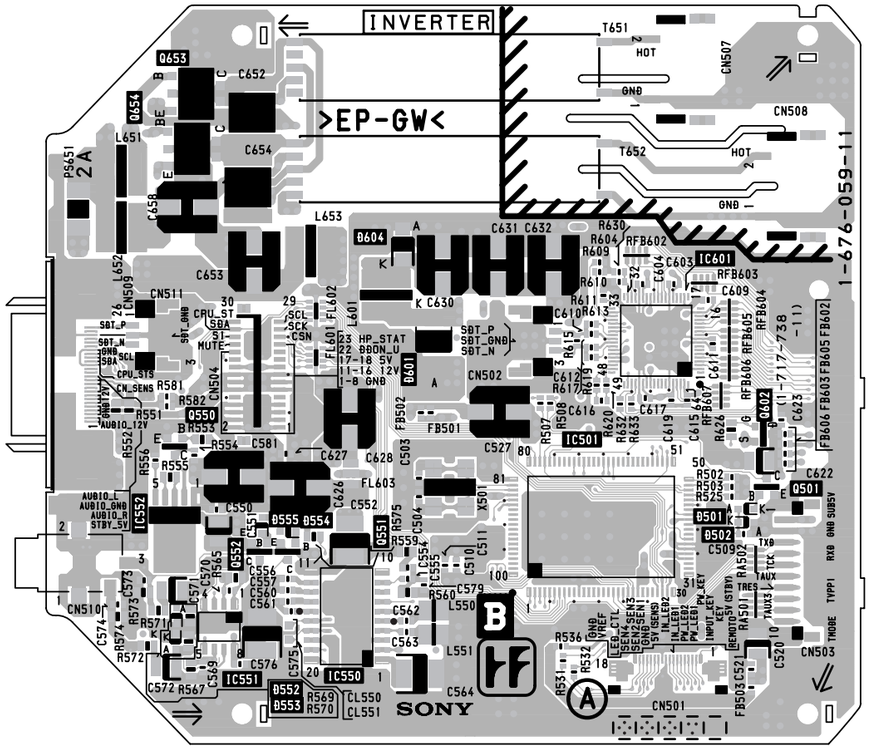
① 4.4 Vp-p (4MHz)


1 2 3 4 5 6 7 8 9 10 11 12
A B C D E F G
12V
TO P2 PWM
5V (SENS)
TO P2 I_SENS
GND
L653 22µH
PS651 2A
12V
L651 47µH
R651 100k 1/16W
C653 39 16V
R657 0
R658 0
R659 0
Q651 DTC114EKA-T146 INV
4.8
0
0
Q652 DTA143XKA-T146 SW
5.8
11.5
R652 5.1k 1/16W
R653 1k 1/4W
R654 1k 1/4W
R655 1k 1/4W
R656 1k 1/4W
Q653 FZT853-TA INV
11.3
0.3
0.1
Q654 FZT853-TA INV
0.3
11.3
C652 0.12 100V
T651 TRANSFORMER POWER
T652 TRANSFORMER POWER
CN507 2P
3 HOT
2 NC
1 GND
TO LAMP
CN508 2P
3 HOT
2 NC
1 GND
TO LAMP
L652 47µH
5V
R667 39k 1/16W
R668 10k 1/16W
R671 22k 1/16W
IC651 µPC393G2
OUTA
IN A-
IN A+
V-
V+
OUTB
IN B-
IN B+
0
5.0
5.0
5.0
0
0
C656 1000p
R666 4.7M 1/16W
R665 56k 1/16W
R664 24k 1/16W
C658 47 16V
C657 0.1 25V
R663 1.8k 1/16W
R669 0.22 1/4W
R670 0.22 1/4W
C655 0.1 25V
C659 0.1 25V
R672 39k 1/16W
B-P3
(INVERTER)
B-SS3514<J..>-B-P3 (24)

— B BOARD (Component Side) —



— B BOARD (Conductor Side) —



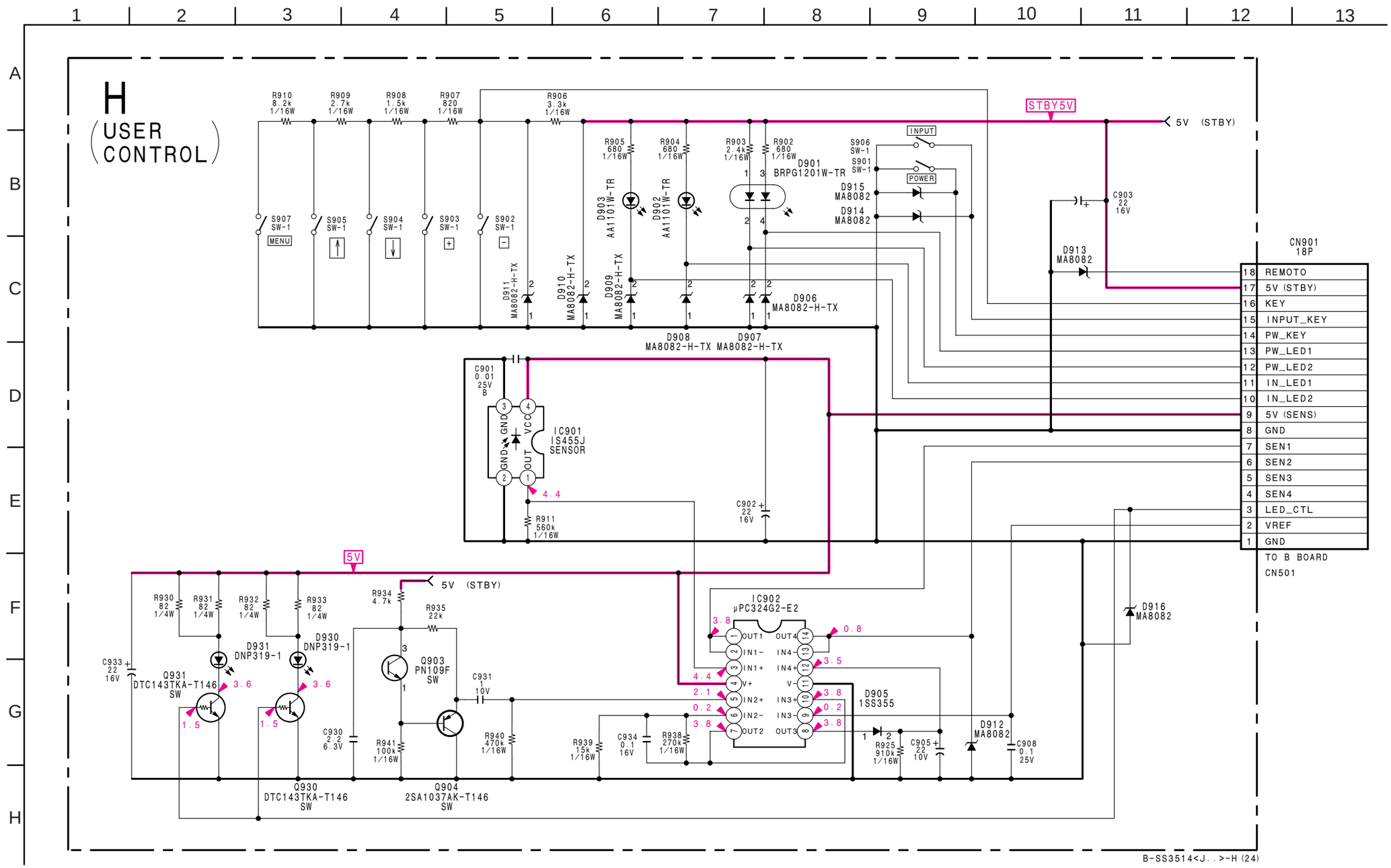
B BOARD

Terminal name of semiconductors in silk screen printed circuit (*)

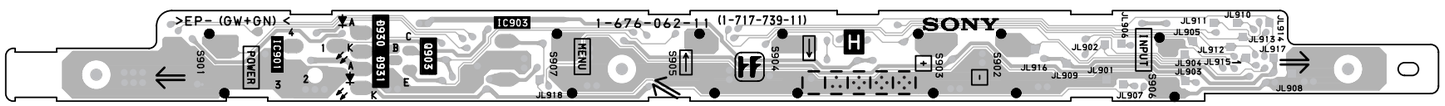
Ref.	*
Q501, Q601, Q651, Q652	②
Q602	⑬
Q653, Q654	⑯
D501 - D503, D601, D603	③

***: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 4-9)**

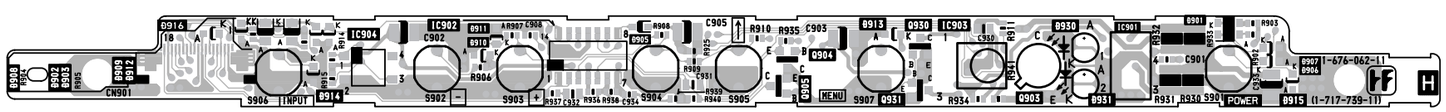
(3) Schematic Diagram of H Board



— H BOARD (Component Side) —



— H BOARD (Conductor Side) —



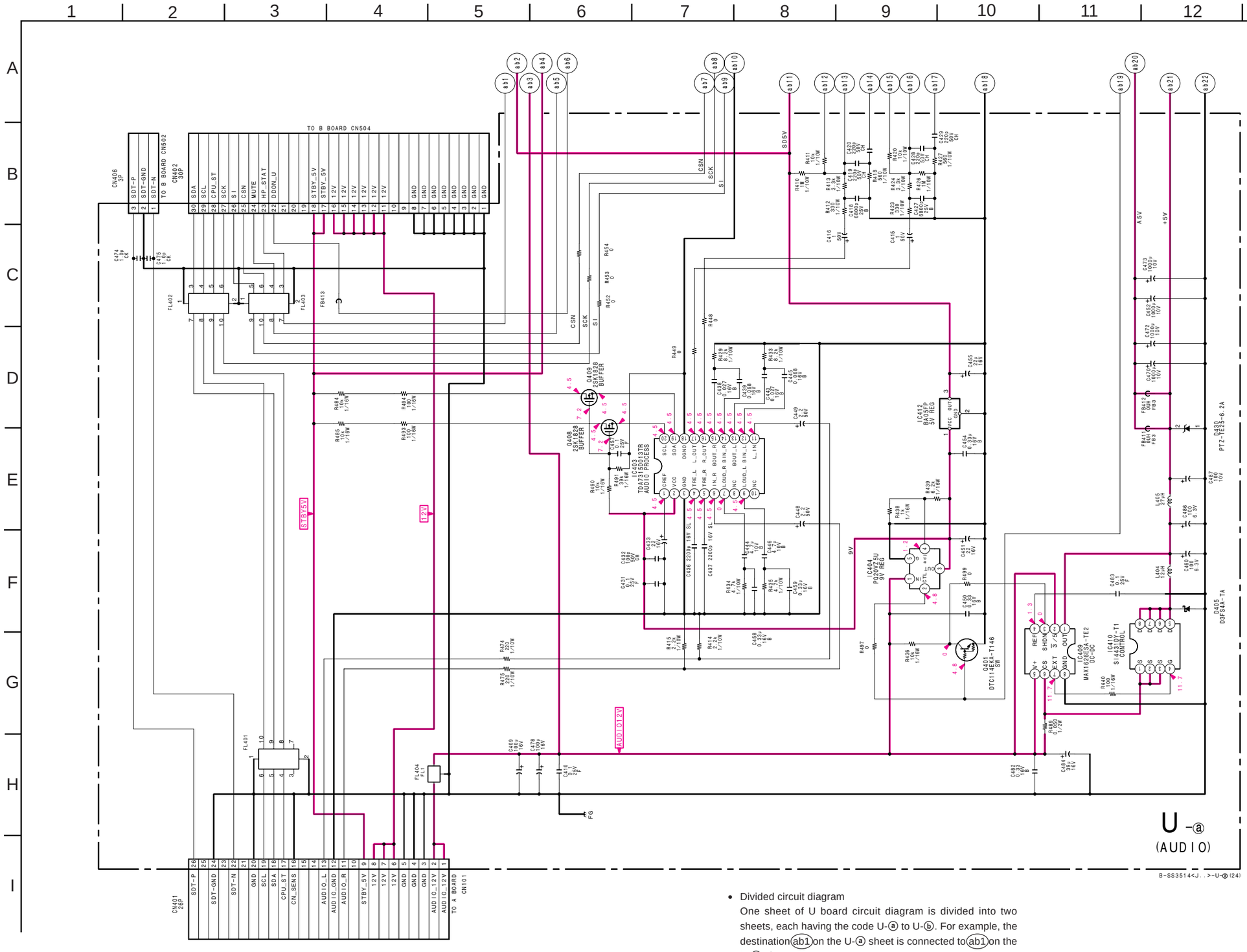
H BOARD

Terminal name of semiconductors in silk screen printed circuit (✻)

Ref.	✻
Q903, Q930, Q931	②
D905 - D916	③

✻: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 4-9)

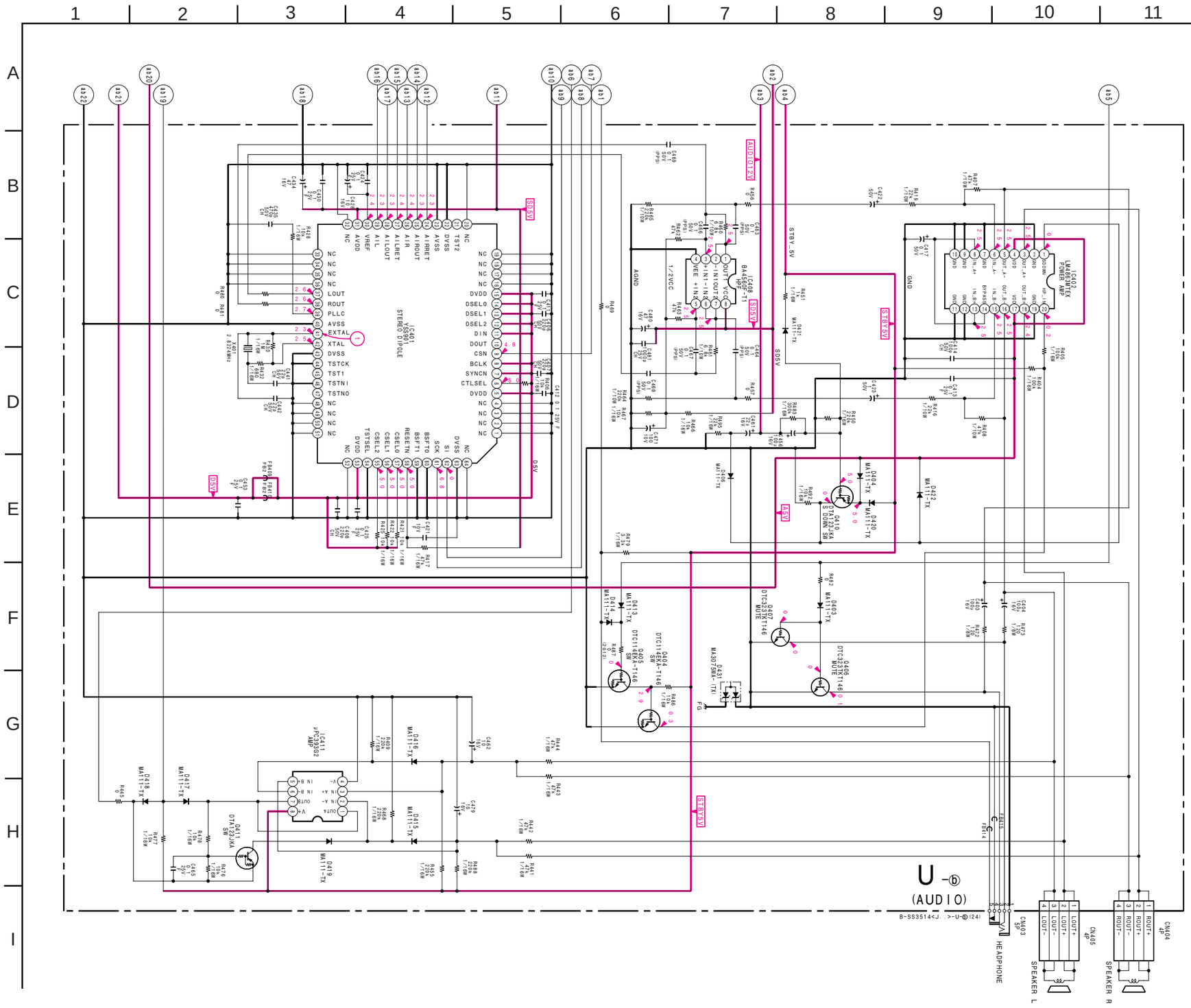
(4) Schematic Diagrams of U Board



- Divided circuit diagram
  One sheet of U board circuit diagram is divided into two sheets, each having the code U-ⓐ to U-ⓑ. For example, the destination (ab1) on the U-ⓐ sheet is connected to (ab1) on the U-ⓑ sheet.

a b 1
- 1 → Ref. No.
- a b → Circuit diagram division code

Schematic diagram
U -ⓐ board ➡



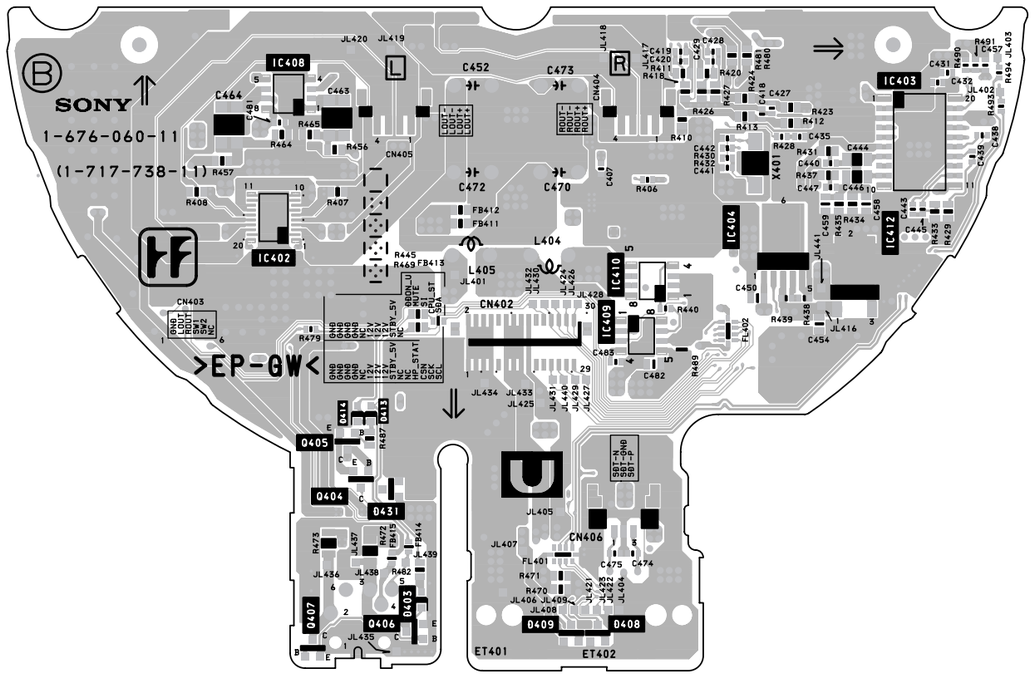
- Divided circuit diagram
  One sheet of U board circuit diagram is divided into two sheets, each having the code U-ⓐ to U-ⓑ. For example, the destination (ab1) on the U-ⓐ sheet is connected to (ab1) on the U-ⓑ sheet.

a b 1
- 1 → Ref. No.
- a b → Circuit diagram division code

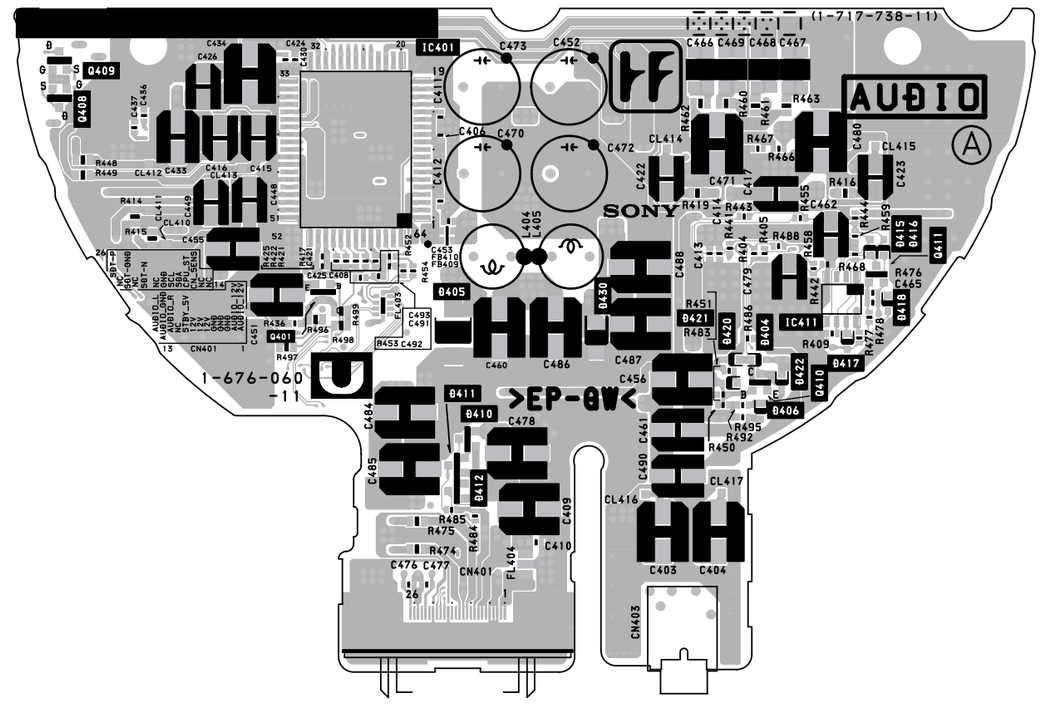
- **U-ⓑ BOARD WAVEFORMS**

① 2.2 Vp-p (2.8224MHz)

— U BOARD (Component Side) —



— U BOARD (Conductor Side) —



U BOARD

Terminal name of semiconductors in silk screen printed circuit (*)

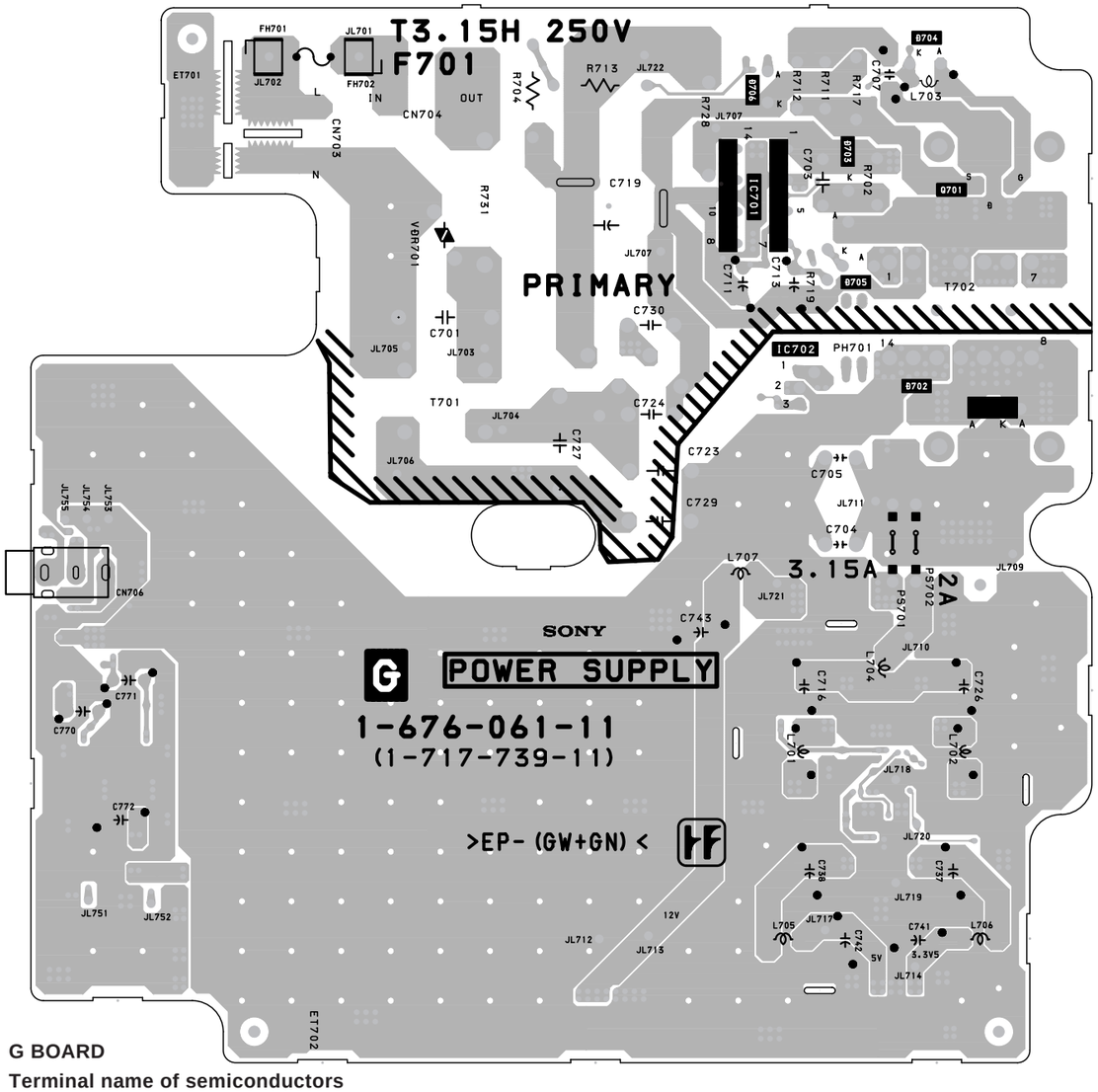
Ref.	*
Q401, Q404 - Q407 Q410, Q411	②
Q408, Q409	⑬
D403 - D406 D413 - D422, D430	③
D431	⑪

***: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 4-9)**

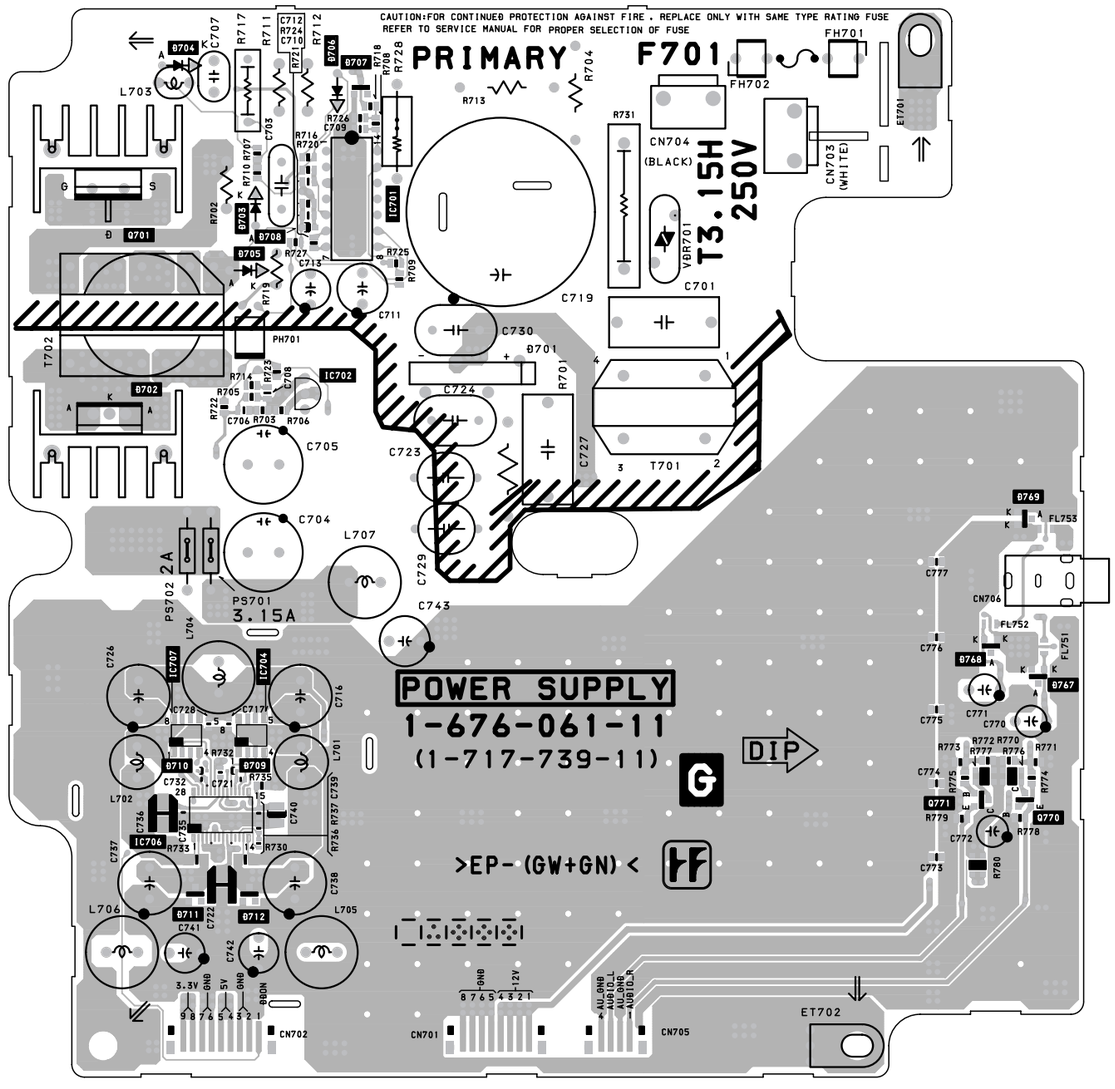
Schematic diagram

← U -ⓑ board

— G BOARD (Component Side) —



— G BOARD (Conductor Side) —



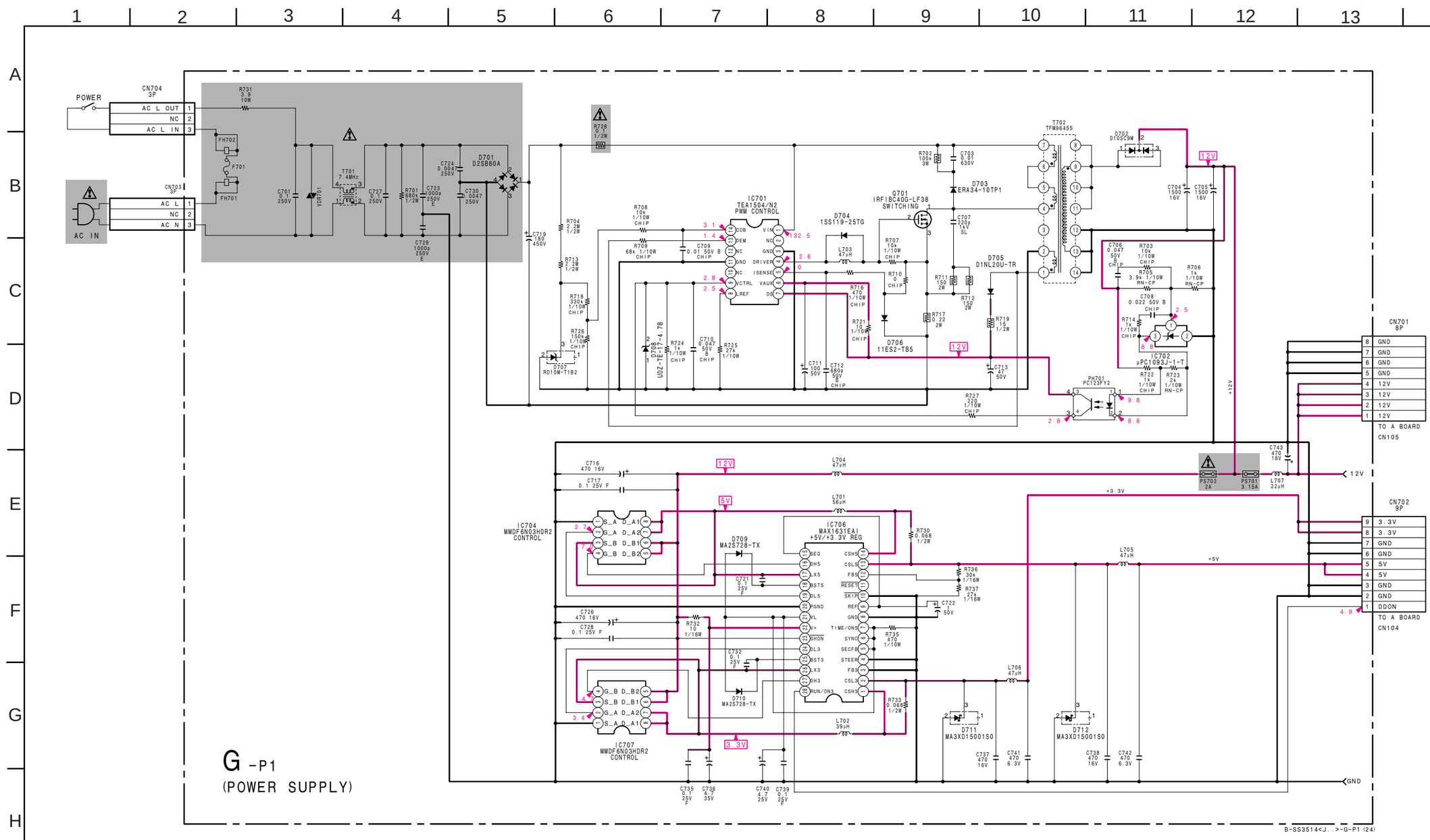
G BOARD

Terminal name of semiconductors in silk screen printed circuit (*)

Ref.	*
Q770, Q771	②
D708 - D710	③
D707, D711, D712	⑤
D767, D768	⑪

***: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 4-9)**

(5) Schematic Diagrams of G (P1-P2) Boards



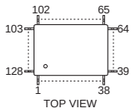
G -P2
(AUDIO IN)

AUDIO IN
CN706 3P AUDIO STEREO JACK
FB750
FB751
AUDIO_R
AUDIO_L
C770 1 50V
C771 1 50V
R770 100k 1/10W
R771 100k 1/10W
R772 100k 1/10W
R773 100k 1/10W
R774 1k 1/10W
R775 1k 1/10W
R776 330 1/4W
R777 330 1/4W
R778 2.2k 1/10W
R779 2.2k 1/10W
C772 100 16V
Q770 2SC2712G BUFFER
Q771 2SC2712G BUFFER
4.4
9.0
3.7
4.3
9.0
3.7
R781 0
R782 0
R783 0
R784 0
R785 0
D767 MA3075WA- (TX)
D768 MA3075WA- (TX)
GND
R786 180 1/4W
R780 180 1/4W
12V
C790 1.0 50V
C791 1.0 50V
C792 1.0 50V
R790 47k 1/10W
R791 47k 1/10W
R792 47k 1/10W
R793 47k 1/10W
R794 47k 1/10W
R795 47k 1/10W
C793 100p
C794 100p
IC790 µPC358G2-E2 BUFFER
OUT1
-IN1
+IN1
VEE
VCC
OUT2
-IN2
+IN2
C795 100p
R796 47k 1/10W
C796 100p
R797 47k 1/10W
C797 0.1 25V
R798 68k 1/10W
R799 47k 1/10W
C798 100 16V
PS791
12V
R788 100 1/10W
R789 100 1/10W
CN705 4P
1 AUDIO_R
2 AUDIO_GND
3 AUDIO_L
4 AUDIO_GND
TO A BOARD CN106

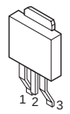
B-SS3514<J..>-G-P2 (24)

4-5. SEMICONDUCTORS

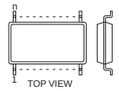
AD9884-AKS-100S



BA033FP-E2
BA05FP-E2

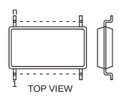


BA4560F
MAX1626ESA-TE2
MM1170BFB
SN74CBTD3306PWR
UPC358G2
UPC393G2
24LC21AT/SN



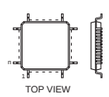
8 pin SOP

BA7078AF-E2



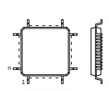
18 pin SOP

CHEETAH3



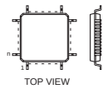
240 pin QFP

CXB1455R



48 pin QFP

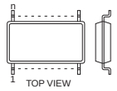
XCB1456R



64 pin QFP

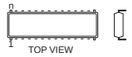
IS455J

LM4863MTEX
TDA7315D013TR



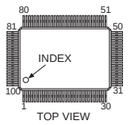
20 pin SOP

MAX1631EAI-TG-068

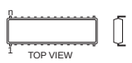


28 pin DIP

MB90F553APF-G-BND



MMDF6N03HDR2
M24C16-MN6T

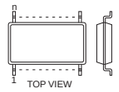


8 pin DIP

MT48LC1M16A1TG-7S

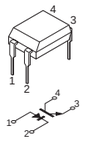
50 pin DIP

M52758FP

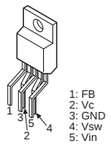


36 pin DIP

PC123F2
PC123FY2



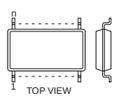
PQ20VZ5U



TC7S04FU(TE85R)
TC74S08FU(TE85R)
TC74S32FU(TE85R)

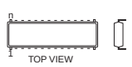
5 pin CHIP

TC74HC4066AFT(EL)
TC74VHCT14AFT(EL)
TC74VHC04FT(EL)
TC74VHC125FT(EL)
TC74VHC86FT(EL)



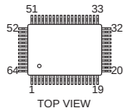
14 pin SOP

TEA1504/N2

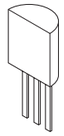


14 pin DIP

YSS901-F



UPC1093J-1-T

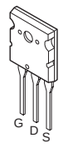


DTA114EKA-T146
DTA123JKA-T146
DTA143XKA-T146
DTC114EK
DTC114EKA-T146
DTC143TKA-T146
DTC323TK
DTC323TKT146
2SA1037AK-T-146-QR
2SC2712G-TE85L
2SC2712-YG

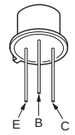
FZT853-TA

IRFIBC40

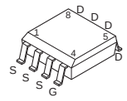
IRFIBC40G-LF38



PN109F



SI2301DS-T1



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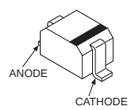
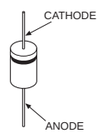
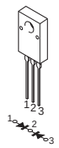
2SK1828TE85L
SI4431DY-T1
DTZ4.7C
MA111
RD12SB2
UCZ-TE-17-12B
UCZ-TE-17-4.7B
1SS355TE-17



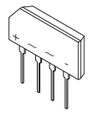
D1NL20U-TR



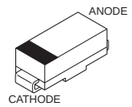
D10SC9M



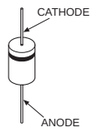
D2SB60A-F04



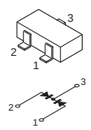
D3FS4A-TA
MA2S728
PTZ-TE25-6.2A



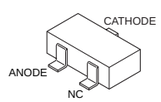
ERA34-10TP1
RGP02-20EL-6394



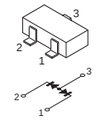
MA151WK-TX
1SS184



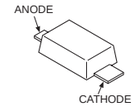
MA3XD15001S0



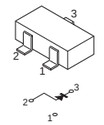
MA3075WA-TX
MA3130WA-TX



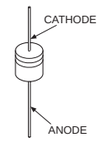
MA8082-H-TX



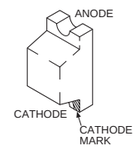
RE10M-B2
RE10M-T1B2



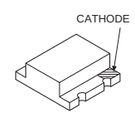
1SS119-25
11ES2



AA1101W



BRPG1201W



Schematic diagram

◀ G -P2 board

SECTION 5
EXPLODED VIEWS

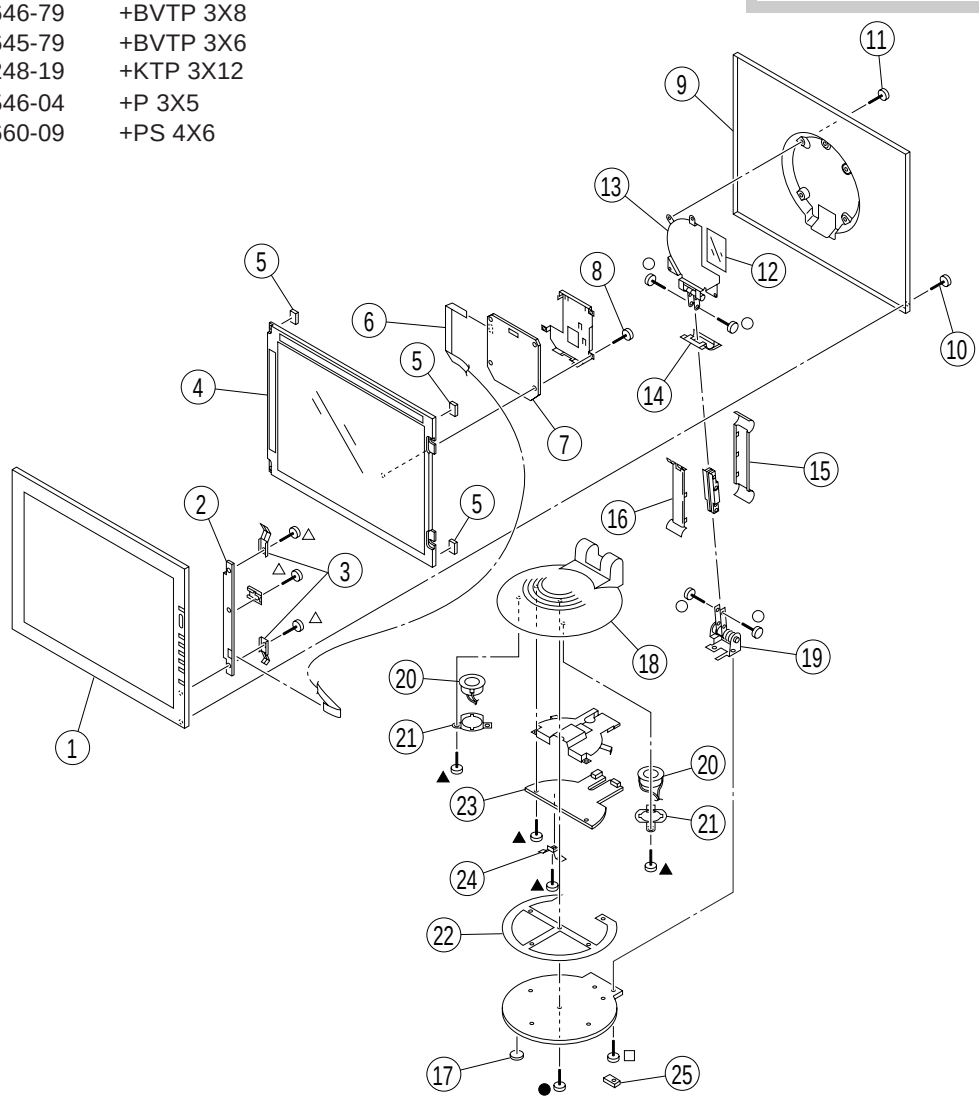
NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

5-1. DISPLAY

▲ 7-685-646-79 +BVTP 3X8
△ 7-685-645-79 +BVTP 3X6
● 7-685-248-19 +KTP 3X12
○ 7-682-546-04 +P 3X5
□ 7-682-660-09 +PS 4X6



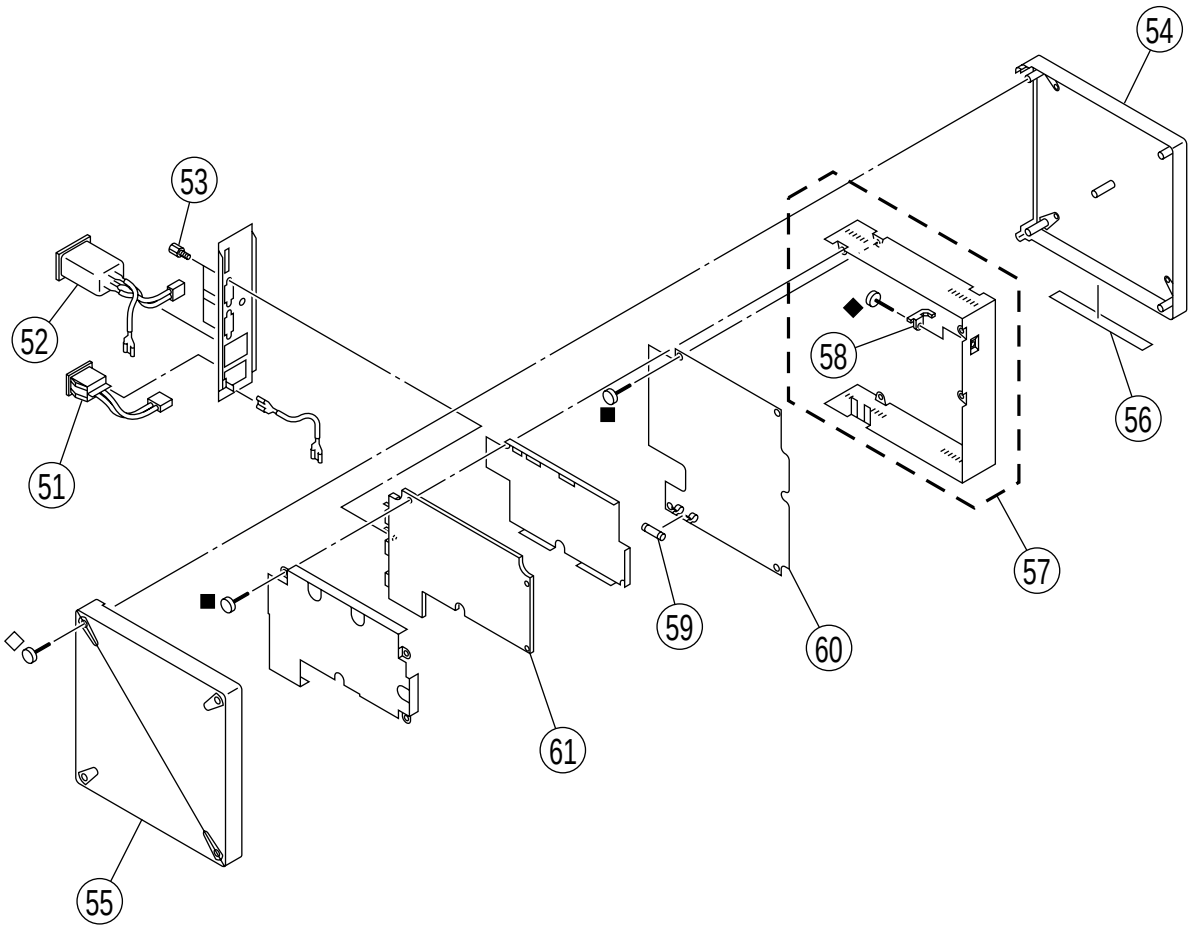
REF.NO.	PART NO.	DESCRIPTION	REMARK
1	X-4037-530-3	COVER ASSY, FRONT	
2	* A-1375-200-A	H BOARD, COMPLETE	
3	4-074-707-01	EARTH (H)	
4	1-803-900-11	LCD MODULE (TFT)	
5	4-074-712-01	HOLDER, PANEL	
6	1-900-251-29	HARENESS ASSY, BH1	
7	* A-1136-059-A	B BOARD, COMPLETE	
8	4-639-967-01	SCREW, 0 PLATE SPECIAL HEAD	
9	4-073-822-02	COVER, REAR	
10	4-075-607-01	TAPPING SCREW 3X8	
11	2-625-102-31	BOLT, HEXAGON M3	
12	4-074-711-01	PLATE, INSULATION	
13	4-073-824-01	HINGE, PANEL	
14	4-073-809-03	COVER (S), HINGE	
15	4-073-816-02	COVER (F), HINGE	
16	4-073-808-02	COVER (R), HINGE	
17	4-074-713-01	LEG, RUBBER	
18	4-073-823-03	COVER, BASE	
19	4-073-825-01	HINGE, BASE	
20	1-529-586-11	SPEAKER (2.7CM)	
21	4-073-810-03	HOLDER, SP	
22	4-074-714-02	RUBBER, ENCLOSURE	
23	* A-1394-966-A	U BOARD, COMPLETE	
24	4-074-708-02	EARTH (U)	
25	4-075-703-01	FOOT (B), RUBBER	
26	4-076-246-01	COVER, CABLE	

5-2. CHASSIS

◇ 7-685-648-79 +BVTP 3X12
◆ 7-682-545-01 +B 3X4
■ 7-685-144-11 +PTP 3X5

The components identified by mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

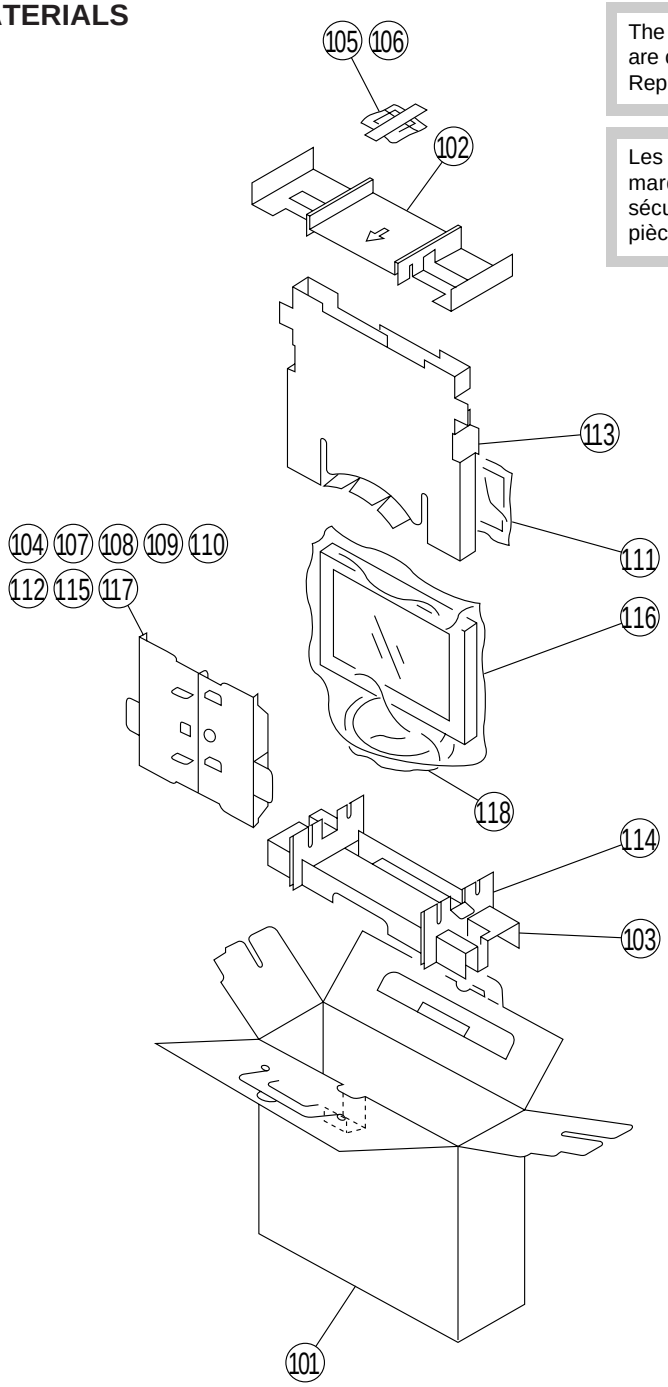


REF.NO.	PART NO.	DESCRIPTION	REMARK
51	1-572-434-31	SWITCH, SEESAW (AC PWOER)	
52	⚠1-794-122-11	INLET, AC (WITH FILTER)	
53	4-070-122-01	SCREW (HD15)	
54	4-073-835-02	CASE (R)	
55	4-073-836-02	CASE (L)	
56	*4-073-828-01	LABEL (B) (AEP)	
56	*4-073-828-11	LABEL (W) (U/C)	
57	X-4037-532-2	PLATE ASSY, CHASSIS	58
58	4-073-814-01	GUIDE, LIGHT	
59	⚠1-576-230-11	FUSE (H.B.C.) (3.15A/250V)	
60	*A-1316-500-A	G BOARD, COMPLETE	
61	*A-1299-074-A	A BOARD, COMPLETE	

5-3. PACKING MATERIALS

The components identified by mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



REF.NO.	PART NO.	DESCRIPTION	REMARK
101	4-075-214-02	INDIVIDUAL CARTON (U/C)	
101	4-075-850-02	INDIVIDUAL CARTON (AEP)	
102	4-075-107-01	BOARD, TOP	
103	4-075-104-01	BOARD (A), BOTTOM	
104	1-469-778-11	CLAMP, FERRITE	
105	1-759-626-21	DISK, UTILITY	
106	1-759-627-23	DISK, INFOEMATION	
107	1-775-444-31	CORD, CONNECTION	
108	⚠1-765-718-11	CORD SET, POWER (U/C)	
108	⚠1-765-719-11	CORDSET, POWER (AEP)	
109	1-778-967-11	ADAPTOR, CONVERSION (U/C)	
109	1-785-512-31	CONNECTORK D SUB (15P CHANGER) (AEP)	
110	1-790-860-11	CABLE ASSY (15PDSUB CONNECTOR)	
111	3-868-361-13	MANUAL, INSTRUCTION (U/C)	
111	3-868-361-22	MANUAL, INSTRUCTION (AEP)	
112	X-4037-533-1	STAND ASSY	
113	4-075-106-01	BOARD, MIDDLE	
114	4-075-105-01	BOARD (B), BOTTOM	
115	4-075-109-01	BAG, PROTECTION	
116	4-075-110-01	BAG, PROTECTION	
117	4-075-111-01	BAG, PROTECTION	
118	4-075-112-01	BAG, PROTECTION	

SECTION 6
ELECTRICAL PARTS LIST

B

NOTE:

The components identified by mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

The components identified by ⧓ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS
- All resistors are in ohms
- F : nonflammable

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- CAPACITORS
  MF : μF
- COILS
  UH : μH

REF.NO.	PART NO.	DESCRIPTION		REMARK
	*A-1136-059-A	B BOARD, COMPLETE **********		
		<CAPACITOR>		
C503	1-162-919-11	CERAMIC CHIP 22PF	5.00%	50V
C504	1-162-919-11	CERAMIC CHIP 22PF	5.00%	50V
C506	1-115-467-11	CERAMIC CHIP 0.22UF	10.00%	10V
C507	1-162-970-11	CERAMIC CHIP 0.01UF	10.00%	25V
C508	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C509	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C510	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C511	1-162-927-11	CERAMIC CHIP 100PF	5.00%	50V
C512	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C513	1-162-927-11	CERAMIC CHIP 100PF	5.00%	50V
C514	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C515	1-162-927-11	CERAMIC CHIP 100PF	5.00%	50V
C516	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C517	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C518	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C520	1-104-913-11	TANTAL. CHIP 10UF	20.00%	16V
C521	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C522	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C525	1-104-851-11	TANTAL. CHIP 10UF	20.00%	10V
C527	1-128-705-11	ELECT 100UF		
C601	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C602	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C603	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C604	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C605	1-128-694-91	TANTAL. CHIP 22UF	20%	10V
C606	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C608	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C609	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C610	1-162-923-11	CERAMIC CHIP 47PF	5.00%	50V
C611	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C612	1-162-923-11	CERAMIC CHIP 47PF	5.00%	50V
C613	1-128-694-91	TANTAL. CHIP 22UF	20%	10V
C614	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C615	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C616	1-164-315-11	CERAMIC CHIP 470PF	5.00%	50V
C617	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C618	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C619	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C620	1-165-112-11	CERAMIC CHIP 0.33UF		16V
C621	1-128-694-91	TANTAL. CHIP 22UF	20%	10V
C622	1-104-913-11	TANTAL. CHIP 10UF	20.00%	16V
C623	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C626	1-135-599-21	ELECT 39UF	20%	16V
C627	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C628	1-135-599-21	ELECT 39UF	20%	16V
C629	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C630	1-135-595-21	ELECT 100UF	20%	6.3V
C631	1-135-595-21	ELECT 100UF	20%	6.3V
C632	1-128-705-11	ELECT 100UF		
C652	1-131-616-11	MYLAR CHIP 0.12UF	10%	100V
C653	1-135-599-21	ELECT 39UF	20%	16V
C655	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C656	1-164-357-11	CERAMIC CHIP 1000PF	5.00%	50V
C657	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C658	1-128-704-11	ELECT 47UF		
C659	1-164-156-11	CERAMIC CHIP 0.1UF		25V
		<CONNECTOR>		
CN501	1-691-356-21	CONNECTOR, FFC/FPC (ZIF) 18P		
CN502	1-793-913-21	PIN, CONNECTOR (WITH PWB) 3P		
CN503	*1-695-223-21	PIN, CONNECTOR (SMD) 10P		
CN504	1-793-911-21	PIN, CONNECTOR (WITH PWB) 30P		
CN505	1-793-912-21	CONNECTOR, BOARD TO BOARD 60P		
CN507	*1-766-311-21	PIN, CONNECTOR (PC BOARD) 2P		
CN508	*1-766-311-21	PIN, CONNECTOR (PC BOARD) 2P		
		<DIODE>		
D501	8-719-988-61	DIODE 1SS355TE-17		
D502	8-719-158-49	ZENER DIODE RD12SB2		
D503	8-719-988-61	DIODE 1SS355TE-17		
D601	8-719-054-47	DIODE D3FS4A-TA		
D604	8-719-073-69	ZENER DIODE PTZ-TE25-6.2A		
		<FERRITE BEAD>		
FB501	1-414-445-11	FERRITE 0UH		
FB502	1-414-445-11	FERRITE 0UH		
FB503	1-414-445-11	FERRITE 0UH		
FB504	1-469-118-21	FERRITE 0UH		
FB505	1-414-445-11	FERRITE 0UH		

The components identified by mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

REF.NO.	PART NO.	DESCRIPTION			REMARK
FB601	1-414-445-11	FERRITE	0UH		
FB602	1-414-445-11	FERRITE	0UH		
FB603	1-414-445-11	FERRITE	0UH		
FB604	1-414-445-11	FERRITE	0UH		
FB605	1-414-445-11	FERRITE	0UH		
FB606	1-414-445-11	FERRITE	0UH		
FB613	1-469-118-21	FERRITE	0UH		
		<FILTER>			
FL601	1-469-461-21	FERRITE	0UH		
FL602	1-469-461-21	FERRITE	0UH		
FL603	1-234-498-21	FILTER, EMI			
		<IC>			
IC501	8-759-654-97	IC MB90F553APF-G-BND-AP02			
IC503	8-759-162-80	IC MM1170BFB			
IC601	8-752-088-88	IC CXB1456R			
IC602	8-759-259-77	IC PQ20VZ5U			
IC603	8-759-485-63	IC MAX1626ESA-TE2			
IC604	8-729-045-53	TRANSISTOR SI4431DY-T1			
IC651	8-759-100-93	IC uPC393G2			
		<COIL>			
L601	1-419-424-21	INDUCTOR 47UH			
L651	1-419-424-21	INDUCTOR 47UH			
L652	1-419-424-21	INDUCTOR 47UH			
L653	1-419-426-21	INDUCTOR 22UH			
		<IC LINK>			
PS651	⚠1-533-999-21	FUSE, (SMD) (2.0A)			
		<TRANSISTOR>			
Q501	8-729-900-53	TRANSISTOR DTC114EK			
Q601	8-729-900-53	TRANSISTOR DTC114EK			
Q602	8-729-046-75	TRANSISTOR SI2301DS-T1			
Q651	8-729-900-53	TRANSISTOR DTC114EK			
Q652	8-729-027-36	TRANSISTOR DTA143XKA-T146			
Q653	8-729-051-52	TRANSISTOR FZT853-TA			
Q654	8-729-051-52	TRANSISTOR FZT853-TA			
		<RESISTOR>			
R501	1-216-833-91	RES-CHIP	10K	5%	1/16W
R502	1-216-833-91	RES-CHIP	10K	5%	1/16W
R503	1-216-833-91	RES-CHIP	10K	5%	1/16W
R507	1-216-809-11	RES-CHIP	100	5%	1/16W
R508	1-216-809-11	RES-CHIP	100	5%	1/16W
R509	1-216-821-11	RES-CHIP	1K	5%	1/16W
R510	1-216-833-91	RES-CHIP	10K	5%	1/16W
R518	1-216-833-91	RES-CHIP	10K	5%	1/16W
R519	1-216-833-91	RES-CHIP	10K	5%	1/16W
R520	1-216-833-91	RES-CHIP	10K	5%	1/16W
R525	1-216-833-91	RES-CHIP	10K	5%	1/16W
R533	1-216-833-91	RES-CHIP	10K	5%	1/16W
R534	1-216-833-91	RES-CHIP	10K	5%	1/16W
R535	1-216-848-11	RES-CHIP	180K	5%	1/16W
R536	1-216-833-91	RES-CHIP	10K	5%	1/16W
R601	1-216-833-91	RES-CHIP	10K	5%	1/16W
R604	1-216-829-11	RES-CHIP	4.7K	5%	1/16W
R606	1-216-829-11	RES-CHIP	4.7K	5%	1/16W
R607	1-216-809-11	RES-CHIP	100	5%	1/16W
R608	1-216-829-11	RES-CHIP	4.7K	5%	1/16W
R609	1-216-829-11	RES-CHIP	4.7K	5%	1/16W
R610	1-216-829-11	RES-CHIP	4.7K	5%	1/16W
R611	1-218-710-91	METAL CHIP	5.6K	0.50%	1/16W
R613	1-218-672-11	METAL CHIP	150	0.50%	1/16W
R615	1-218-668-11	METAL CHIP	100	0.50%	1/16W
R617	1-218-672-11	METAL CHIP	150	0.50%	1/16W
R619	1-218-660-91	METAL CHIP	47	0.50%	1/16W
R620	1-218-660-91	METAL CHIP	47	0.50%	1/16W
R624	1-216-821-11	RES-CHIP	1K	5%	1/16W
R625	1-218-697-11	METAL CHIP	1.6K	0.50%	1/16W
R626	1-216-295-91	SHORT	0		
R631	1-216-833-91	RES-CHIP	10K	5%	1/16W
R632	1-216-801-11	RES-CHIP	22	5%	1/16W
R633	1-216-801-11	RES-CHIP	22	5%	1/16W
R634	1-240-941-91	METAL CHIP	0.05	1%	1/2W
R635	1-216-809-11	RES-CHIP	100	5%	1/16W
R651	1-216-845-11	RES-CHIP	100K	5%	1/16W
R652	1-218-272-11	RES-CHIP	5.1K	5%	1/16W
R653	1-220-264-11	RES-CHIP	1K	5%	1/4W
R654	1-220-264-11	RES-CHIP	1K	5%	1/4W
R655	1-220-264-11	RES-CHIP	1K	5%	1/4W
R656	1-220-264-11	RES-CHIP	1K	5%	1/4W
R657	1-216-295-91	SHORT	0		
R658	1-216-295-91	SHORT	0		
R659	1-216-295-91	SHORT	0		
R663	1-218-698-11	METAL CHIP	1.8K	0.50%	1/16W
R664	1-218-725-11	RES-CHIP	24K	5%	1/16W
R665	1-218-734-11	METAL CHIP	56K	0.50%	1/16W
R666	1-220-397-11	RES-CHIP	4.7M	5%	1/16W
R667	1-216-840-11	RES-CHIP	39K	5%	1/16W
R668	1-216-833-91	RES-CHIP	10K	5%	1/16W
R669	1-211-899-11	RES-CHIP	0.22	10%	1/4W
R670	1-211-899-11	RES-CHIP	0.22	10%	1/4W
R671	1-216-837-11	RES-CHIP	22K	5%	1/16W
R672	1-216-840-11	RES-CHIP	39K	5%	1/16W
		<NETWORK RESISTOR>			
RA501	1-239-412-11	NETWORK RESISTOR (CHIP) 100			
RA502	1-239-412-11	NETWORK RESISTOR (CHIP) 100			
		<FERRITE>			
RFB602	1-469-312-21	ARRAY, FERRITE CHIP			
RFB603	1-469-312-21	ARRAY, FERRITE CHIP			
RFB604	1-469-312-21	ARRAY, FERRITE CHIP			
RFB605	1-469-312-21	ARRAY, FERRITE CHIP			

B H

REF.NO.	PART NO.	DESCRIPTION			REMARK
RFB606	1-469-312-21	ARRAY, FERRITE CHIP			
RFB607	1-469-312-21	ARRAY, FERRITE CHIP			
		<TRANSFORMER>			
T651	1-435-299-11	TRANSFORMER, INVERTER (SMD)			
T652	1-435-299-11	TRANSFORMER, INVERTER (SMD)			
		<CRYSTAL>			
X501	1-767-340-11	VIBRATOR, CRYSTAL			
**********					
	* A-1375-200-A	H BOARD, COMPLETE			
		**********			
		<CAPACITOR>			
C901	1-162-970-11	CERAMIC CHIP 0.01UF	10.00%	25V	
C902	1-119-751-11	TANTAL. CHIP 22UF	20.00%	16V	
C903	1-119-751-11	TANTAL. CHIP 22UF	20.00%	16V	
C905	1-104-852-11	TANTAL. CHIP 22UF	20.00%	10V	
C908	1-164-156-11	CERAMIC CHIP 0.1UF		25V	
C930	1-125-838-91	CERAMIC CHIP 2.2UF	10%	6.3V	
C931	1-109-982-11	CERAMIC CHIP 1UF	10.00%	10V	
C933	1-119-751-11	TANTAL. CHIP 22UF	20.00%	16V	
C934	1-107-826-91	CERAMIC CHIP 0.1UF	10.00%	16V	
		<CONNECTOR>			
CN901	1-691-356-21	CONNECTOR, FFC/FPC (ZIF) 18P			
		<DIODE>			
D901	8-719-991-97	DIODE BRPG1201W			
D902	8-719-951-14	DIODE AA1101W			
D903	8-719-951-14	DIODE AA1101W			
D905	8-719-988-61	DIODE 1SS355TE-17			
D906	8-719-422-89	ZENER DIODE MA8082-H-TX			
D907	8-719-422-89	ZENER DIODE MA8082-H-TX			
D908	8-719-422-89	ZENER DIODE MA8082-H-TX			
D909	8-719-422-89	ZENER DIODE MA8082-H-TX			
D910	8-719-422-89	ZENER DIODE MA8082-H-TX			
D911	8-719-422-89	ZENER DIODE MA8082-H-TX			
D912	8-719-422-89	ZENER DIODE MA8082-H-TX			
D913	8-719-422-89	ZENER DIODE MA8082-H-TX			
D914	8-719-422-89	ZENER DIODE MA8082-H-TX			
D915	8-719-422-89	ZENER DIODE MA8082-H-TX			
D916	8-719-422-89	ZENER DIODE MA8082-H-TX			
D930	8-719-079-68	DIODE DNP319-1			
D931	8-719-079-68	DIODE DNP319-1			

REF.NO.	PART NO.	DESCRIPTION			REMARK
		<IC>			
IC901	8-759-189-86	IC IS455J			
IC902	8-759-100-95	IC uPC324G2			
		<TRANSISTOR>			
Q903	8-729-051-44	TRANSISTOR PN109F			
Q904	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R			
Q930	8-729-027-56	TRANSISTOR DTC143TKA-T146			
Q931	8-729-027-56	TRANSISTOR DTC143TKA-T146			
		<RESISTOR>			
R902	1-216-819-11	RES-CHIP	680	5%	1/16W
R903	1-218-701-11	RES-CHIP	2.4K	5%	1/16W
R904	1-216-819-11	RES-CHIP	680	5%	1/16W
R905	1-216-819-11	RES-CHIP	680	5%	1/16W
R906	1-216-827-11	RES-CHIP	3.3K	5%	1/16W
R907	1-216-820-11	RES-CHIP	820	5%	1/16W
R908	1-216-823-11	RES-CHIP	1.5K	5%	1/16W
R909	1-216-826-11	RES-CHIP	2.7K	5%	1/16W
R910	1-216-832-11	RES-CHIP	8.2K	5%	1/16W
R911	1-216-854-11	RES-CHIP	560K	5%	1/16W
R925	1-202-931-11	RES-CHIP	910K	5%	1/16W
R930	1-220-257-91	RES-CHIP	82	5%	1/4W
R931	1-220-257-91	RES-CHIP	82	5%	1/4W
R932	1-220-257-91	RES-CHIP	82	5%	1/4W
R933	1-220-257-91	RES-CHIP	82	5%	1/4W
R934	1-216-829-11	RES-CHIP	4.7K	5%	1/16W
R935	1-216-837-11	RES-CHIP	22K	5%	1/16W
R938	1-216-850-11	RES-CHIP	270K	5%	1/16W
R939	1-216-835-11	RES-CHIP	15K	5%	1/16W
R940	1-216-853-11	RES-CHIP	470K	5%	1/16W
R941	1-216-845-11	RES-CHIP	100K	5%	1/16W
		<SWITCH>			
S901	1-771-855-21	SWITCH, KEYBOARD (POWER)			
S902	1-771-855-21	SWITCH, KEYBOARD (-)			
S903	1-771-855-21	SWITCH, KEYBOARD (+)			
S904	1-771-855-21	SWITCH, KEYBOARD (DOWN)			
S905	1-771-855-21	SWITCH, KEYBOARD (UP)			
S906	1-771-855-21	SWITCH, KEYBOARD (INPUT)			
S907	1-771-855-21	SWITCH, KEYBOARD (MENU)			
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REF.NO.	PART NO.	DESCRIPTION			REMARK
	* A-1394-966-A	U BOARD, COMPLETE			
		**********			
	4-075-598-01	PAN HEAD SCREW M1.6			
		<CAPACITOR>			
C403	1-117-681-11	ELECT CHIP	100UF	20.00%	16V
C404	1-117-681-11	ELECT CHIP	100UF	20.00%	16V
C406	1-164-230-11	CERAMIC CHIP	220PF	5.00%	50V
C407	1-164-230-11	CERAMIC CHIP	220PF	5.00%	50V
C408	1-164-230-11	CERAMIC CHIP	220PF	5.00%	50V
C409	1-117-681-11	ELECT CHIP	100UF	20.00%	16V
C410	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C411	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C412	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C413	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C414	1-162-927-11	CERAMIC CHIP	100PF	5.00%	50V
C415	1-126-193-11	ELECT CHIP	1UF	20.00%	50V
C416	1-126-193-11	ELECT CHIP	1UF	20.00%	50V
C417	1-126-187-11	ELECT CHIP	0.1UF	20.00%	50V
C418	1-162-969-11	CERAMIC CHIP	0.0068UF	10.00%	25V
C419	1-164-230-11	CERAMIC CHIP	220PF	5.00%	50V
C420	1-164-230-11	CERAMIC CHIP	220PF	5.00%	50V
C421	1-115-156-11	CERAMIC CHIP	1UF		10V
C422	1-126-193-11	ELECT CHIP	1UF	20.00%	50V
C423	1-126-193-11	ELECT CHIP	1UF	20.00%	50V
C424	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C425	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C426	1-124-779-00	ELECT CHIP	10UF	20.00%	16V
C427	1-162-969-11	CERAMIC CHIP	0.0068UF	10.00%	25V
C428	1-164-230-11	CERAMIC CHIP	220PF	5.00%	50V
C429	1-164-230-11	CERAMIC CHIP	220PF	5.00%	50V
C430	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C431	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C432	1-162-927-11	CERAMIC CHIP	100PF	5.00%	50V
C433	1-126-395-11	ELECT CHIP	22UF	20.00%	16V
C434	1-126-204-11	ELECT CHIP	47UF	20.00%	16V
C435	1-164-315-11	CERAMIC CHIP	470PF	5.00%	50V
C436	1-164-676-11	CERAMIC CHIP	2200PF	5.00%	16V
C437	1-164-676-11	CERAMIC CHIP	2200PF	5.00%	16V
C438	1-104-700-11	CERAMIC CHIP	0.027UF	10.00%	16V
C439	1-110-563-11	CERAMIC CHIP	0.068UF	10.00%	16V
C441	1-162-919-11	CERAMIC CHIP	22PF	5.00%	50V
C442	1-162-919-11	CERAMIC CHIP	22PF	5.00%	50V
C443	1-104-700-11	CERAMIC CHIP	0.027UF	10.00%	16V
C444	1-115-566-11	CERAMIC CHIP	4.7UF	10.00%	10V
C445	1-110-563-11	CERAMIC CHIP	0.068UF	10.00%	16V
C446	1-115-566-11	CERAMIC CHIP	4.7UF	10.00%	10V
C448	1-126-601-11	ELECT CHIP	2.2UF	20.00%	50V
C449	1-126-601-11	ELECT CHIP	2.2UF	20.00%	50V
C450	1-110-501-11	CERAMIC CHIP	0.33UF	10.00%	16V
C451	1-126-395-11	ELECT CHIP	22UF	20.00%	16V
C452	1-128-835-91	ELECT	1000UF	20%	10V
C453	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C454	1-110-501-11	CERAMIC CHIP	0.33UF	10.00%	16V
C455	1-126-395-11	ELECT CHIP	22UF	20.00%	16V
C456	1-117-681-11	ELECT CHIP	100UF	20.00%	16V
C457	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C458	1-110-501-11	CERAMIC CHIP	0.33UF	10.00%	16V
C459	1-110-501-11	CERAMIC CHIP	0.33UF	10.00%	16V
C460	1-135-595-21	ELECT	100UF	20%	6.3V
C461	1-126-395-11	ELECT CHIP	22UF	20.00%	16V
C462	1-124-779-00	ELECT CHIP	10UF	20.00%	16V
C463	1-117-749-11	FILM CHIP	0.1UF	20.00%	50V
C464	1-117-749-11	FILM CHIP	0.1UF	20.00%	50V
C465	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C466	1-117-749-11	FILM CHIP	0.1UF	20.00%	50V
C467	1-117-749-11	FILM CHIP	0.1UF	20.00%	50V
C468	1-117-749-11	FILM CHIP	0.1UF	20.00%	50V
C469	1-117-749-11	FILM CHIP	0.1UF	20.00%	50V
C470	1-128-835-91	ELECT	1000UF	20%	10V
C471	1-128-995-21	ELECT CHIP	100UF	20%	10V
C472	1-128-835-91	ELECT	1000UF	20%	10V
C473	1-128-835-91	ELECT	1000UF	20%	10V
C474	1-162-905-11	CERAMIC CHIP	1PF	0.25PF	50V
C475	1-162-905-11	CERAMIC CHIP	1PF	0.25PF	50V
C478	1-117-681-11	ELECT CHIP	100UF	20.00%	16V
C479	1-124-779-00	ELECT CHIP	10UF	20.00%	16V
C480	1-126-204-11	ELECT CHIP	47UF	20.00%	16V
C481	1-115-416-11	CERAMIC CHIP	1000PF	5.00%	25V
C482	1-110-501-11	CERAMIC CHIP	0.33UF	10.00%	16V
C483	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C484	1-135-599-21	ELECT	39UF	20%	16V
C486	1-135-595-21	ELECT	100UF	20%	6.3V
C487	1-128-995-21	ELECT CHIP	100UF	20%	10V
		<CONNECTOR>			
CN401	1-794-071-21	CONNECTOR, INTERFACE 26P			
CN402	1-793-911-21	PIN, CONNECTOR (WITH PWB) 30P			
CN403	1-695-514-21	JACK (SMALL TYPE) 1P			
CN404	* 1-580-057-11	PIN, CONNECTOR (SMD) 4P			
CN405	* 1-580-057-11	PIN, CONNECTOR (SMD) 4P			
CN406	1-793-913-21	PIN, CONNECTOR (WITH PWB) 3P			
		<DIODE>			
D403	8-719-073-01	DIODE MA111-(K8).S0			
D404	8-719-073-01	DIODE MA111-(K8).S0			
D405	8-719-054-47	DIODE D3FS4A-TA			
D406	8-719-073-01	DIODE MA111-(K8).S0			
D413	8-719-073-01	DIODE MA111-(K8).S0			
D414	8-719-073-01	DIODE MA111-(K8).S0			
D415	8-719-073-01	DIODE MA111-(K8).S0			
D416	8-719-073-01	DIODE MA111-(K8).S0			
D417	8-719-073-01	DIODE MA111-(K8).S0			
D418	8-719-073-01	DIODE MA111-(K8).S0			
D419	8-719-073-01	DIODE MA111-(K8).S0			
D420	8-719-073-01	DIODE MA111-(K8).S0			
D421	8-719-073-01	DIODE MA111-(K8).S0			
D422	8-719-073-01	DIODE MA111-(K8).S0			

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REF.NO.	PART NO.	DESCRIPTION			REMARK
D430	8-719-073-69	ZENER DIODE PTZ-TE25-6.2A			
D431	8-719-421-59	DIODE MA3130WA-TX			
		<FERRITE BEAD>			
FB409	1-414-445-11	FERRITE	0UH		
FB410	1-414-445-11	FERRITE	0UH		
FB411	1-469-324-21	FERRITE	0UH		
FB412	1-469-324-21	FERRITE	0UH		
FB413	1-469-118-21	FERRITE	0UH		
FB414	1-414-760-21	FERRITE	0UH		
FB415	1-414-760-21	FERRITE	0UH		
		<FILTER>			
FL401	1-469-461-21	FERRITE	0UH		
FL402	1-469-461-21	FERRITE	0UH		
FL403	1-469-461-21	FERRITE	0UH		
FL404	1-234-498-21	FILTER, EMI			
		<IC>			
IC401	8-759-650-06	IC YSS901-F			
IC402	8-759-596-49	IC LM4863MTEX			
IC403	8-759-273-12	IC TDA7315D013TR			
IC404	8-759-259-77	IC PQ20VZ5U			
IC408	8-759-924-46	IC BA4560F			
IC409	8-759-485-63	IC MAX1626ESA-TE2			
IC410	8-729-045-53	TRANSISTOR SI4431DY-T1			
IC411	8-759-100-93	IC uPC393G2			
IC412	8-759-460-74	IC BA05FP-E2			
		<COIL>			
L404	1-412-526-11	INDUCTOR 12UH			
L405	1-412-530-31	INDUCTOR 27UH			
		<TRANSISTOR>			
Q401	8-729-900-53	TRANSISTOR DTC114EK			
Q404	8-729-900-53	TRANSISTOR DTC114EK			
Q405	8-729-900-53	TRANSISTOR DTC114EK			
Q406	8-729-015-39	TRANSISTOR DTC323TK			
Q407	8-729-015-39	TRANSISTOR DTC323TK			
Q408	8-729-025-28	TRANSISTOR 2SK1828			
Q409	8-729-025-28	TRANSISTOR 2SK1828			
Q410	8-729-027-29	TRANSISTOR DTA123JKA-T146			
Q411	8-729-027-29	TRANSISTOR DTA123JKA-T146			
		<RESISTOR>			
R404	1-216-845-11	RES-CHIP	100K	5%	1/16W
R405	1-216-845-11	RES-CHIP	100K	5%	1/16W
R406	1-216-833-91	RES-CHIP	10K	5%	1/16W
R407	1-240-091-21	RES-CHIP	47K	5%	1/10W
R408	1-240-091-21	RES-CHIP	47K	5%	1/10W
R409	1-216-849-11	RES-CHIP	220K	5%	1/16W
R410	1-218-776-11	RES-CHIP	1M	5%	1/10W
R411	1-216-675-11	RES-CHIP	10K	5%	1/10W
R412	1-216-639-11	RES-CHIP	330	5%	1/10W
R413	1-216-663-11	RES-CHIP	3.3K	5%	1/10W
R414	1-216-659-11	RES-CHIP	2.2K	5%	1/10W
R415	1-216-659-11	RES-CHIP	2.2K	5%	1/10W
R416	1-216-683-11	RES-CHIP	22K	5%	1/10W
R417	1-216-841-11	RES-CHIP	47K	5%	1/16W
R418	1-240-068-21	RES-CHIP	560	5%	1/10W
R419	1-216-683-11	RES-CHIP	22K	5%	1/10W
R420	1-216-675-11	RES-CHIP	10K	5%	1/10W
R421	1-216-833-91	RES-CHIP	10K	5%	1/16W
R422	1-216-833-91	RES-CHIP	10K	5%	1/16W
R423	1-216-639-11	RES-CHIP	330	5%	1/10W
R424	1-216-663-11	RES-CHIP	3.3K	5%	1/10W
R425	1-216-833-91	RES-CHIP	10K	5%	1/16W
R426	1-218-776-11	RES-CHIP	1M	5%	1/10W
R427	1-240-068-21	RES-CHIP	560	5%	1/10W
R428	1-216-833-91	RES-CHIP	10K	5%	1/16W
R429	1-240-082-21	RES-CHIP	8.2K	5%	1/10W
R430	1-216-857-11	RES-CHIP	1M	5%	1/16W
R432	1-216-819-11	RES-CHIP	680	5%	1/16W
R433	1-240-082-21	RES-CHIP	8.2K	5%	1/10W
R434	1-240-079-21	RES-CHIP	4.7K	5%	1/10W
R435	1-240-079-21	RES-CHIP	4.7K	5%	1/10W
R436	1-216-833-91	RES-CHIP	10K	5%	1/16W
R438	1-216-821-11	RES-CHIP	1K	5%	1/16W
R439	1-218-711-11	METAL CHIP	6.2K	0.50%	1/16W
R440	1-216-809-11	RES-CHIP	100	5%	1/16W
R441	1-216-841-11	RES-CHIP	47K	5%	1/16W
R442	1-216-841-11	RES-CHIP	47K	5%	1/16W
R443	1-216-841-11	RES-CHIP	47K	5%	1/16W
R444	1-216-841-11	RES-CHIP	47K	5%	1/16W
R445	1-216-295-91	SHORT	0		
R448	1-216-295-91	SHORT	0		
R449	1-216-295-91	SHORT	0		
R450	1-216-849-11	RES-CHIP	220K	5%	1/16W
R451	1-216-821-11	RES-CHIP	1K	5%	1/16W
R452	1-216-864-11	SHORT	0		
R453	1-216-864-11	SHORT	0		
R454	1-216-864-11	SHORT	0		
R455	1-216-849-11	RES-CHIP	220K	5%	1/16W
R456	1-216-295-91	SHORT	0		
R457	1-216-295-91	SHORT	0		
R460	1-240-081-21	RES-CHIP	6.8K	5%	1/10W
R461	1-240-081-21	RES-CHIP	6.8K	5%	1/10W
R462	1-240-091-21	RES-CHIP	47K	5%	1/10W
R463	1-240-091-21	RES-CHIP	47K	5%	1/10W
R464	1-240-099-21	RES-CHIP	220K	5%	1/10W
R465	1-240-099-21	RES-CHIP	220K	5%	1/10W
R466	1-216-833-91	RES-CHIP	10K	5%	1/16W
R467	1-216-833-91	RES-CHIP	10K	5%	1/16W
R468	1-216-849-11	RES-CHIP	220K	5%	1/16W
R469	1-216-295-91	SHORT	0		
R472	1-240-129-21	RES-CHIP	120	5%	1/8W

REF.NO.	PART NO.	DESCRIPTION			REMARK
R473	1-240-129-21	RES-CHIP	120	5%	1/8W
R474	1-240-063-21	RES-CHIP	220	5%	1/10W
R475	1-240-063-21	RES-CHIP	220	5%	1/10W
R476	1-216-833-91	RES-CHIP	10K	5%	1/16W
R477	1-216-833-91	RES-CHIP	10K	5%	1/16W
R478	1-216-833-91	RES-CHIP	10K	5%	1/16W
R479	1-216-827-11	RES-CHIP	3.3K	5%	1/16W
R480	1-216-295-91	SHORT	0		
R481	1-216-295-91	SHORT	0		
R482	1-216-295-91	SHORT	0		
R483	1-218-751-11	RES-CHIP	300K	5%	1/16W
R484	1-216-833-91	RES-CHIP	10K	5%	1/16W
R485	1-216-833-91	RES-CHIP	10K	5%	1/16W
R486	1-216-833-91	RES-CHIP	10K	5%	1/16W
R487	1-216-295-91	SHORT	0		
R488	1-216-849-11	RES-CHIP	220K	5%	1/16W
R489	1-240-941-91	METAL CHIP	0.05	1%	1/2W
R490	1-216-833-91	RES-CHIP	10K	5%	1/16W
R491	1-216-840-11	RES-CHIP	39K	5%	1/16W
R492	1-216-833-91	RES-CHIP	10K	5%	1/16W
R493	1-216-809-11	RES-CHIP	100	5%	1/16W
R494	1-216-809-11	RES-CHIP	100	5%	1/16W
R495	1-216-837-11	RES-CHIP	22K	5%	1/16W
R497	1-216-295-91	SHORT	0		
R499	1-216-295-91	SHORT	0		
		<CRYSTAL>			
X401	1-781-713-21	VIBRATOR, CERAMIC			
**********					
	* A-1299-074-A	A BOARD, COMPLETE			
		**********			
	4-075-598-01	PAN HEAD SCREW M1.6			
		<CAPACITOR>			
C101	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C102	1-162-919-11	CERAMIC CHIP	22PF	5.00%	50V
C103	1-162-919-11	CERAMIC CHIP	22PF	5.00%	50V
C104	1-162-927-11	CERAMIC CHIP	100PF	5.00%	50V
C105	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C106	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C107	1-162-927-11	CERAMIC CHIP	100PF	5.00%	50V
C108	1-162-970-11	CERAMIC CHIP	0.01UF	10.00%	25V
C109	1-162-970-11	CERAMIC CHIP	0.01UF	10.00%	25V
C110	1-104-606-11	ELECT CHIP	150UF	20.00%	10V
C111	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C112	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C113	1-104-606-11	ELECT CHIP	150UF	20.00%	10V
C114	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C120	1-164-156-11	CERAMIC CHIP	0.1UF		25V

REF.NO.	PART NO.	DESCRIPTION			REMARK
C123	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C124	1-162-970-11	CERAMIC CHIP	0.01UF	10.00%	25V
C125	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C126	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C127	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C128	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C129	1-162-927-11	CERAMIC CHIP	100PF	5.00%	50V
C130	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C131	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C132	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C133	1-104-606-11	ELECT CHIP	150UF	20.00%	10V
C134	1-162-970-11	CERAMIC CHIP	0.01UF	10.00%	25V
C201	1-113-642-11	TANTAL. CHIP	47UF	20.00%	10V
C203	1-162-970-11	CERAMIC CHIP	0.01UF	10.00%	25V
C204	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C205	1-128-993-21	ELECT CHIP	22UF	20%	10V
C206	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C207	1-113-642-11	TANTAL. CHIP	47UF	20.00%	10V
C208	1-104-606-11	ELECT CHIP	150UF	20.00%	10V
C209	1-162-970-11	CERAMIC CHIP	0.01UF	10.00%	25V
C210	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C211	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C212	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C213	1-113-642-11	TANTAL. CHIP	47UF	20.00%	10V
C214	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C215	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C216	1-162-970-11	CERAMIC CHIP	0.01UF	10.00%	25V
C217	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C218	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C219	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C220	1-113-642-11	TANTAL. CHIP	47UF	20.00%	10V
C221	1-162-970-11	CERAMIC CHIP	0.01UF	10.00%	25V
C222	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C223	1-113-642-11	TANTAL. CHIP	47UF	20.00%	10V
C224	1-162-970-11	CERAMIC CHIP	0.01UF	10.00%	25V
C225	1-113-642-11	TANTAL. CHIP	47UF	20.00%	10V
C226	1-162-970-11	CERAMIC CHIP	0.01UF	10.00%	25V
C230	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C233	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C234	1-135-210-11	TANTAL. CHIP	4.7UF	20.00%	10V
C235	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C236	1-164-346-11	CERAMIC CHIP	1UF		16V
C237	1-125-891-11	CERAMIC CHIP	0.47UF	10.00%	10V
C238	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C239	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C240	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C241	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C242	1-162-927-11	CERAMIC CHIP	100PF	5.00%	50V
C243	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C244	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C245	1-128-993-21	ELECT CHIP	22UF	20%	10V
C246	1-164-346-11	CERAMIC CHIP	1UF		16V
C247	1-125-891-11	CERAMIC CHIP	0.47UF	10.00%	10V
C248	1-164-346-11	CERAMIC CHIP	1UF		16V
C249	1-125-891-11	CERAMIC CHIP	0.47UF	10.00%	10V
C250	1-164-156-11	CERAMIC CHIP	0.1UF		25V

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REF.NO.	PART NO.	DESCRIPTION		REMARK
C251	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C254	1-110-563-11	CERAMIC CHIP 0.068UF	10.00%	16V
C259	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C260	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C268	1-162-927-11	CERAMIC CHIP 100PF	5.00%	50V
C276	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C278	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C279	1-110-563-11	CERAMIC CHIP 0.068UF	10.00%	16V
C280	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C281	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C282	1-110-563-11	CERAMIC CHIP 0.068UF	10.00%	16V
C283	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C284	1-162-927-11	CERAMIC CHIP 100PF	5.00%	50V
C285	1-164-357-11	CERAMIC CHIP 1000PF	5.00%	50V
C287	1-128-993-21	ELECT CHIP 22UF	20%	10V
C288	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C289	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C290	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C291	1-162-970-11	CERAMIC CHIP 0.01UF	10.00%	25V
C292	1-115-467-11	CERAMIC CHIP 0.22UF	10.00%	10V
C293	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C294	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C295	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C296	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C297	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C298	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C299	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C301	1-128-993-21	ELECT CHIP 22UF	20%	10V
C302	1-162-927-11	CERAMIC CHIP 100PF	5.00%	50V
C303	1-162-970-11	CERAMIC CHIP 0.01UF	10.00%	25V
C304	1-128-993-21	ELECT CHIP 22UF	20%	10V
C305	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C306	1-128-993-21	ELECT CHIP 22UF	20%	10V
C307	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C308	1-162-927-11	CERAMIC CHIP 100PF	5.00%	50V
C309	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C310	1-162-927-11	CERAMIC CHIP 100PF	5.00%	50V
C311	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C312	1-162-927-11	CERAMIC CHIP 100PF	5.00%	50V
C313	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C314	1-162-927-11	CERAMIC CHIP 100PF	5.00%	50V
C315	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C316	1-128-993-21	ELECT CHIP 22UF	20%	10V
C317	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C318	1-128-993-21	ELECT CHIP 22UF	20%	10V
C319	1-162-927-11	CERAMIC CHIP 100PF	5.00%	50V
C320	1-162-927-11	CERAMIC CHIP 100PF	5.00%	50V
C321	1-162-970-11	CERAMIC CHIP 0.01UF	10.00%	25V
C322	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C327	1-162-927-11	CERAMIC CHIP 100PF	5.00%	50V
C328	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C329	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C330	1-164-357-11	CERAMIC CHIP 1000PF	5.00%	50V
C331	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C332	1-162-927-11	CERAMIC CHIP 100PF	5.00%	50V
C333	1-162-970-11	CERAMIC CHIP 0.01UF	10.00%	25V
C334	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C335	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C336	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C337	1-164-357-11	CERAMIC CHIP 1000PF	5.00%	50V
C338	1-128-993-21	ELECT CHIP 22UF	20%	10V
C339	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C340	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C341	1-162-927-11	CERAMIC CHIP 100PF	5.00%	50V
C342	1-162-927-11	CERAMIC CHIP 100PF	5.00%	50V
C343	1-162-927-11	CERAMIC CHIP 100PF	5.00%	50V
C344	1-162-970-11	CERAMIC CHIP 0.01UF	10.00%	25V
C345	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C346	1-164-357-11	CERAMIC CHIP 1000PF	5.00%	50V
C347	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C348	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C349	1-128-993-21	ELECT CHIP 22UF	20%	10V
C350	1-164-357-11	CERAMIC CHIP 1000PF	5.00%	50V
C351	1-128-993-21	ELECT CHIP 22UF	20%	10V
C352	1-128-993-21	ELECT CHIP 22UF	20%	10V
C353	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C354	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C355	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C356	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C357	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C358	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C359	1-128-993-21	ELECT CHIP 22UF	20%	10V
C360	1-115-412-11	CERAMIC CHIP 680PF	5.00%	25V
C361	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C362	1-162-970-11	CERAMIC CHIP 0.01UF	10.00%	25V
C364	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C365	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C366	1-126-200-11	ELECT CHIP 10UF	20.00%	35V
C367	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C368	1-162-927-11	CERAMIC CHIP 100PF	5.00%	50V
C369	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C370	1-162-927-11	CERAMIC CHIP 100PF	5.00%	50V
C371	1-162-927-11	CERAMIC CHIP 100PF	5.00%	50V
C372	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C373	1-162-927-11	CERAMIC CHIP 100PF	5.00%	50V
C374	1-164-156-11	CERAMIC CHIP 0.1UF		25V
C375	1-162-927-11	CERAMIC CHIP 100PF	5.00%	50V
C376	1-216-864-11	SHORT 0		
C377	1-216-864-11	SHORT 0		
C380	1-162-927-11	CERAMIC CHIP 100PF	5.00%	50V
C381	1-162-927-11	CERAMIC CHIP 100PF	5.00%	50V
C382	1-162-927-11	CERAMIC CHIP 100PF	5.00%	50V
C383	1-162-927-11	CERAMIC CHIP 100PF	5.00%	50V

<CONNECTOR>

CN101	1-794-071-21	CONNECTOR, INTERFACE 26P
CN102	1-793-183-11	CONNECTOR, D SUB 15P
CN103	1-793-183-11	CONNECTOR, D SUB 15P
CN104	* 1-766-376-11	PIN, CONNECTOR (1.5MM)(SMD) 9P
CN105	* 1-691-591-11	PIN, CONNECTOR (1.5MM) (SMD)8P
CN106	1-573-290-21	PIN, CONNECTOR (1.5MM) (SMD)4P

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN107	*1-580-789-21	PIN, CONNECTOR (SMD) 6P	
CN108	*1-695-223-21	PIN, CONNECTOR (SMD) 10P	
		<DIODE>	
D001	8-719-801-78	DIODE 1SS184	
D002	8-719-801-78	DIODE 1SS184	
D003	8-719-801-78	DIODE 1SS184	
D004	8-719-801-78	DIODE 1SS184	
D101	8-719-991-97	DIODE BRPG1201W	
D102	8-719-801-78	DIODE 1SS184	
D103	8-719-988-61	DIODE 1SS355TE-17	
D104	8-719-158-49	ZENER DIODE RD12SB2	
D105	8-719-801-78	DIODE 1SS184	
D207	8-719-988-61	DIODE 1SS355TE-17	
D208	8-719-421-59	DIODE MA3130WA-TX	
D209	8-719-421-59	DIODE MA3130WA-TX	
D210	8-719-421-59	DIODE MA3130WA-TX	
D211	8-719-421-59	DIODE MA3130WA-TX	
D212	8-719-421-59	DIODE MA3130WA-TX	
D213	8-719-421-59	DIODE MA3130WA-TX	
D214	8-719-422-89	ZENER DIODE MA8082-H-TX	
D215	8-719-422-89	ZENER DIODE MA8082-H-TX	
D216	8-719-422-89	ZENER DIODE MA8082-H-TX	
D217	8-719-422-89	ZENER DIODE MA8082-H-TX	
D218	8-719-422-89	ZENER DIODE MA8082-H-TX	
D219	8-719-422-89	ZENER DIODE MA8082-H-TX	
D220	8-719-422-89	ZENER DIODE MA8082-H-TX	
D221	8-719-422-89	ZENER DIODE MA8082-H-TX	
D222	8-719-422-89	ZENER DIODE MA8082-H-TX	
D223	8-719-422-89	ZENER DIODE MA8082-H-TX	
D224	8-719-422-89	ZENER DIODE MA8082-H-TX	
D225	8-719-422-89	ZENER DIODE MA8082-H-TX	
D306	8-719-988-61	DIODE 1SS355TE-17	
		<TERMINAL>	
ET001	1-694-592-31	TERMINAL	
ET002	1-694-592-31	TERMINAL	
ET007	1-694-592-31	TERMINAL	
		<FERRITE BEAD>	
FB101	1-414-445-11	FERRITE 0UH	
FB102	1-414-445-11	FERRITE 0UH	
FB103	1-414-445-11	FERRITE 0UH	
FB104	1-414-445-11	FERRITE 0UH	
FB105	1-469-324-21	FERRITE 0UH	
FB106	1-469-324-21	FERRITE 0UH	
FB107	1-469-324-21	FERRITE 0UH	
FB108	1-469-324-21	FERRITE 0UH	
FB201	1-414-445-11	FERRITE 0UH	
FB207	1-469-118-21	FERRITE 0UH	
FB208	1-469-118-21	FERRITE 0UH	
FB209	1-469-118-21	FERRITE 0UH	
FB210	1-469-118-21	FERRITE 0UH	
FB211	1-469-118-21	FERRITE 0UH	
FB212	1-469-118-21	FERRITE 0UH	
FB213	1-469-324-21	FERRITE 0UH	
FB214	1-469-647-21	FERRITE 0UH	
FB216	1-469-118-21	FERRITE 0UH	
FB217	1-469-118-21	FERRITE 0UH	
FB218	1-469-118-21	FERRITE 0UH	
FB219	1-469-118-21	FERRITE 0UH	
FB220	1-414-445-11	FERRITE 0UH	
FB221	1-414-445-11	FERRITE 0UH	
FB301	1-414-445-11	FERRITE 0UH	
FB302	1-414-445-11	FERRITE 0UH	
FB303	1-414-445-11	FERRITE 0UH	
FB308	1-414-445-11	FERRITE 0UH	
FB309	1-414-445-11	FERRITE 0UH	
FB310	1-414-445-11	FERRITE 0UH	
FB311	1-414-445-11	FERRITE 0UH	
FB316	1-469-324-21	FERRITE 0UH	
FB318	1-469-118-21	FERRITE 0UH	
FB319	1-469-118-21	FERRITE 0UH	
FB320	1-469-324-21	FERRITE 0UH	
FB321	1-414-445-11	FERRITE 0UH	
FB324	1-469-647-21	FERRITE 0UH	
FB325	1-469-647-21	FERRITE 0UH	
FB326	1-469-647-21	FERRITE 0UH	
FB327	1-469-647-21	FERRITE 0UH	
FB328	1-469-647-21	FERRITE 0UH	
FB329	1-469-647-21	FERRITE 0UH	
FB330	1-469-647-21	FERRITE 0UH	
FB331	1-469-647-21	FERRITE 0UH	
FB332	1-469-647-21	FERRITE 0UH	
FB333	1-469-647-21	FERRITE 0UH	
FB334	1-469-647-21	FERRITE 0UH	
FB335	1-469-647-21	FERRITE 0UH	
FB336	1-469-647-21	FERRITE 0UH	
FB337	1-469-647-21	FERRITE 0UH	
FB338	1-469-647-21	FERRITE 0UH	
FB339	1-469-647-21	FERRITE 0UH	
FB340	1-469-647-21	FERRITE 0UH	
FB341	1-469-113-21	FERRITE 0UH	
FB342	1-469-113-21	FERRITE 0UH	
FB343	1-469-113-21	FERRITE 0UH	
FB344	1-469-113-21	FERRITE 0UH	
FB345	1-469-113-21	FERRITE 0UH	
FB346	1-469-113-21	FERRITE 0UH	
FB347	1-469-113-21	FERRITE 0UH	
FB348	1-469-113-21	FERRITE 0UH	
FB349	1-469-113-21	FERRITE 0UH	
FB350	1-469-113-21	FERRITE 0UH	
FB351	1-469-113-21	FERRITE 0UH	
FB352	1-469-113-21	FERRITE 0UH	
FB353	1-469-113-21	FERRITE 0UH	
FB354	1-469-113-21	FERRITE 0UH	
FB355	1-469-113-21	FERRITE 0UH	
FB356	1-469-113-21	FERRITE 0UH	
FB357	1-469-113-21	FERRITE 0UH	
FB358	1-469-113-21	FERRITE 0UH	

A

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by mark ⚠ are critical for safety. Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK
FB359	1-469-113-21	FERRITE 0UH	
FB360	1-469-113-21	FERRITE 0UH	
FB361	1-469-113-21	FERRITE 0UH	
FB362	1-469-113-21	FERRITE 0UH	
		<FILTER>	
FL301	1-234-498-21	FILTER, EMI	
FL302	1-234-498-21	FILTER, EMI	
FL303	1-469-461-21	FERRITE 0UH	
		<IC>	
IC101	8-759-654-98	IC MB90F553APF-G-BND-AP01	
IC102	8-759-058-58	IC TC7S04FU(TE85R)	
IC103	8-759-527-77	IC M24C16-MN6T	
IC105	8-759-162-80	IC MM1170BFB	
IC106	8-759-442-20	IC 24LC21AT/SN	
IC107	8-759-442-20	IC 24LC21AT/SN	
IC108	8-759-523-03	IC TC74HC4066AFT(EL)	
IC109	8-759-058-62	IC TC7S08FU(TE85R)	
IC203	8-759-058-64	IC TC7S32FU(TE85R)	
IC205	8-759-541-25	IC M52758FP	
IC206	8-759-584-88	IC BA7078AF-E2	
IC207	8-759-524-04	IC TC74VHC125FT(EL)	
IC208	8-759-599-01	IC TC74VHCT14AFT(EL)	
IC209	8-759-491-46	IC TC74VHCT04FT(EL)	
IC210	8-759-523-96	IC TC74VHC86FT(EL)	
IC211	8-759-524-04	IC TC74VHC125FT(EL)	
IC212	8-759-473-74	IC SN74CBTD3306PWR	
IC214	8-759-671-54	IC AD9884AKS-100S	
IC215	8-759-524-04	IC TC74VHC125FT(EL)	
IC216	8-759-460-72	IC BA033FP-E2	
IC301	8-759-650-75	IC CHEETAH3	
IC302	8-759-641-60	IC MT48LC1M16A1TG-7S	
IC303	8-759-641-60	IC MT48LC1M16A1TG-7S	
IC304	8-752-087-78	IC CXB1455R	
		<COIL>	
L201	1-419-424-21	INDUCTOR 47UH	
		<IC LINK>	
PS201	⚠1-576-122-21	LINK, IC	
PS202	⚠1-576-122-21	LINK, IC	
		<TRANSISTOR>	
Q101	8-729-900-53	TRANSISTOR DTC114EK	
Q102	8-729-900-53	TRANSISTOR DTC114EK	
Q103	8-729-046-75	TRANSISTOR SI2301DS-T1	
Q201	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q301	8-729-046-75	TRANSISTOR SI2301DS-T1	
Q302	8-729-046-75	TRANSISTOR SI2301DS-T1	
Q303	8-729-046-75	TRANSISTOR SI2301DS-T1	

REF.NO.	PART NO.	DESCRIPTION			REMARK
		<RESISTOR>			
R101	1-216-809-11	RES-CHIP	100	5%	1/16W
R102	1-216-809-11	RES-CHIP	100	5%	1/16W
R103	1-216-809-11	RES-CHIP	100	5%	1/16W
R104	1-216-833-91	RES-CHIP	10K	5%	1/16W
R105	1-216-835-11	RES-CHIP	15K	5%	1/16W
R106	1-216-835-11	RES-CHIP	15K	5%	1/16W
R107	1-216-833-91	RES-CHIP	10K	5%	1/16W
R108	1-216-833-91	RES-CHIP	10K	5%	1/16W
R109	1-216-864-11	SHORT	0		
R110	1-216-864-11	SHORT	0		
R111	1-216-835-11	RES-CHIP	15K	5%	1/16W
R112	1-216-835-11	RES-CHIP	15K	5%	1/16W
R113	1-216-864-11	SHORT	0		
R114	1-216-864-11	SHORT	0		
R115	1-216-819-11	RES-CHIP	680	5%	1/16W
R116	1-216-813-11	RES-CHIP	220	5%	1/16W
R117	1-216-809-11	RES-CHIP	100	5%	1/16W
R118	1-216-833-91	RES-CHIP	10K	5%	1/16W
R119	1-216-821-11	RES-CHIP	1K	5%	1/16W
R120	1-216-809-11	RES-CHIP	100	5%	1/16W
R121	1-216-833-91	RES-CHIP	10K	5%	1/16W
R122	1-216-833-91	RES-CHIP	10K	5%	1/16W
R123	1-216-833-91	RES-CHIP	10K	5%	1/16W
R124	1-216-801-11	RES-CHIP	22	5%	1/16W
R125	1-218-708-11	METAL CHIP	4.7K	0.50%	1/16W
R126	1-216-864-11	SHORT	0		
R127	1-216-864-11	SHORT	0		
R128	1-216-809-11	RES-CHIP	100	5%	1/16W
R129	1-216-809-11	RES-CHIP	100	5%	1/16W
R130	1-216-809-11	RES-CHIP	100	5%	1/16W
R131	1-216-809-11	RES-CHIP	100	5%	1/16W
R132	1-216-809-11	RES-CHIP	100	5%	1/16W
R133	1-216-809-11	RES-CHIP	100	5%	1/16W
R135	1-216-833-91	RES-CHIP	10K	5%	1/16W
R136	1-216-833-91	RES-CHIP	10K	5%	1/16W
R137	1-216-833-91	RES-CHIP	10K	5%	1/16W
R138	1-216-833-91	RES-CHIP	10K	5%	1/16W
R139	1-216-833-91	RES-CHIP	10K	5%	1/16W
R141	1-216-833-91	RES-CHIP	10K	5%	1/16W
R143	1-216-295-91	SHORT	0		
R144	1-216-821-11	RES-CHIP	1K	5%	1/16W
R145	1-216-821-11	RES-CHIP	1K	5%	1/16W
R146	1-216-833-91	RES-CHIP	10K	5%	1/16W
R147	1-216-833-91	RES-CHIP	10K	5%	1/16W
R148	1-216-821-11	RES-CHIP	1K	5%	1/16W
R149	1-216-864-11	SHORT	0		
R150	1-216-833-91	RES-CHIP	10K	5%	1/16W
R151	1-216-833-91	RES-CHIP	10K	5%	1/16W
R152	1-216-821-11	RES-CHIP	1K	5%	1/16W
R201	1-216-295-91	SHORT	0		
R202	1-216-295-91	SHORT	0		
R203	1-216-295-91	SHORT	0		
R205	1-216-295-91	SHORT	0		
R206	1-216-295-91	SHORT	0		
R207	1-216-295-91	SHORT	0		

REF.NO.	PART NO.	DESCRIPTION			REMARK
R208	1-218-706-11	METAL CHIP	3.9K	0.50%	1/16W
R209	1-216-022-00	RES-CHIP	75	5%	1/10W
R210	1-216-022-00	RES-CHIP	75	5%	1/10W
R211	1-216-022-00	RES-CHIP	75	5%	1/10W
R212	1-216-805-11	RES-CHIP	47	5%	1/16W
R213	1-216-295-91	SHORT	0		
R214	1-216-295-91	SHORT	0		
R215	1-216-805-11	RES-CHIP	47	5%	1/16W
R216	1-216-295-91	SHORT	0		
R217	1-216-805-11	RES-CHIP	47	5%	1/16W
R218	1-216-295-91	SHORT	0		
R219	1-216-295-91	SHORT	0		
R220	1-216-295-91	SHORT	0		
R222	1-216-805-11	RES-CHIP	47	5%	1/16W
R224	1-216-805-11	RES-CHIP	47	5%	1/16W
R225	1-216-864-11	SHORT	0		
R226	1-216-022-00	RES-CHIP	75	5%	1/10W
R227	1-216-022-00	RES-CHIP	75	5%	1/10W
R228	1-216-022-00	RES-CHIP	75	5%	1/10W
R229	1-216-805-11	RES-CHIP	47	5%	1/16W
R231	1-216-805-11	RES-CHIP	47	5%	1/16W
R232	1-216-801-11	RES-CHIP	22	5%	1/16W
R233	1-216-801-11	RES-CHIP	22	5%	1/16W
R234	1-216-801-11	RES-CHIP	22	5%	1/16W
R235	1-216-805-11	RES-CHIP	47	5%	1/16W
R236	1-216-805-11	RES-CHIP	47	5%	1/16W
R238	1-216-825-11	RES-CHIP	2.2K	5%	1/16W
R239	1-216-825-11	RES-CHIP	2.2K	5%	1/16W
R241	1-216-833-91	RES-CHIP	10K	5%	1/16W
R242	1-216-821-11	RES-CHIP	1K	5%	1/16W
R243	1-216-295-91	SHORT	0		
R244	1-216-857-11	RES-CHIP	1M	5%	1/16W
R250	1-216-864-11	SHORT	0		
R252	1-216-809-11	RES-CHIP	100	5%	1/16W
R253	1-216-805-11	RES-CHIP	47	5%	1/16W
R255	1-216-819-11	RES-CHIP	680	5%	1/16W
R256	1-216-805-11	RES-CHIP	47	5%	1/16W
R258	1-216-825-11	RES-CHIP	2.2K	5%	1/16W
R259	1-216-825-11	RES-CHIP	2.2K	5%	1/16W
R264	1-216-809-11	RES-CHIP	100	5%	1/16W
R267	1-216-801-11	RES-CHIP	22	5%	1/16W
R269	1-216-809-11	RES-CHIP	100	5%	1/16W
R274	1-216-833-91	RES-CHIP	10K	5%	1/16W
R277	1-216-295-91	SHORT	0		
R278	1-216-295-91	SHORT	0		
R279	1-216-295-91	SHORT	0		
R280	1-216-295-91	SHORT	0		
R281	1-216-295-91	SHORT	0		
R282	1-216-295-91	SHORT	0		
R283	1-216-835-11	RES-CHIP	15K	5%	1/16W
R284	1-216-835-11	RES-CHIP	15K	5%	1/16W
R285	1-216-833-91	RES-CHIP	10K	5%	1/16W
R289	1-216-833-91	RES-CHIP	10K	5%	1/16W
R290	1-216-833-91	RES-CHIP	10K	5%	1/16W
R291	1-216-822-11	RES-CHIP	1.2K	5%	1/16W
R292	1-216-833-91	RES-CHIP	10K	5%	1/16W
R294	1-216-864-11	SHORT	0		
R295	1-216-864-11	SHORT	0		
R296	1-216-808-11	RES-CHIP	82	5%	1/16W
R298	1-216-801-11	RES-CHIP	22	5%	1/16W
R299	1-216-833-91	RES-CHIP	10K	5%	1/16W
R301	1-216-864-11	SHORT	0		
R302	1-216-833-91	RES-CHIP	10K	5%	1/16W
R303	1-216-864-11	SHORT	0		
R307	1-216-833-91	RES-CHIP	10K	5%	1/16W
R319	1-216-864-11	SHORT	0		
R320	1-216-833-91	RES-CHIP	10K	5%	1/16W
R321	1-218-661-11	METAL CHIP	51	0.50%	1/16W
R322	1-218-661-11	METAL CHIP	51	0.50%	1/16W
R323	1-218-708-11	METAL CHIP	4.7K	0.50%	1/16W
R325	1-218-708-11	METAL CHIP	4.7K	0.50%	1/16W
R326	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R327	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R337	1-216-801-11	RES-CHIP	22	5%	1/16W
R338	1-216-833-91	RES-CHIP	10K	5%	1/16W
R339	1-216-793-11	RES-CHIP	4.7	5%	1/16W
R340	1-216-793-11	RES-CHIP	4.7	5%	1/16W
R341	1-216-833-91	RES-CHIP	10K	5%	1/16W
R342	1-216-833-91	RES-CHIP	10K	5%	1/16W
R343	1-216-833-91	RES-CHIP	10K	5%	1/16W
R344	1-216-833-91	RES-CHIP	10K	5%	1/16W
R345	1-216-833-91	RES-CHIP	10K	5%	1/16W
R347	1-216-813-11	RES-CHIP	220	5%	1/16W
R348	1-216-805-11	RES-CHIP	47	5%	1/16W

<NETWORK RESISTOR>

RA101	1-239-412-11	NETWORK RESISTOR (CHIP) 100
RA102	1-239-412-11	NETWORK RESISTOR (CHIP) 100
RA203	1-239-412-11	NETWORK RESISTOR (CHIP) 100
RA204	1-239-412-11	NETWORK RESISTOR (CHIP) 100
RA205	1-239-412-11	NETWORK RESISTOR (CHIP) 100
RA206	1-239-412-11	NETWORK RESISTOR (CHIP) 100
RA207	1-239-412-11	NETWORK RESISTOR (CHIP) 100
RA208	1-239-412-11	NETWORK RESISTOR (CHIP) 100

<THERMISTOR>

TH101	1-809-050-21	THERMISTOR
TH201	1-809-050-21	THERMISTOR

<CRYSTAL>

X101	1-767-340-11	VIBRATOR, CRYSTAL
X301	1-781-723-21	OSCILLATOR, CRYSTAL

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G

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by mark ⚠ are critical for safety. Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION			REMARK
	*A-1316-500-A	G BOARD, COMPLETE			
		**********			
	1-694-592-31	TERMINAL			
	7-682-649-09	SCREW +PS 3X10			
		<CAPACITOR>			
C701	⚠1-104-705-51	MYLAR	0.1UF	20.00%	250V
C703	1-136-203-91	MYLAR	0.01UF	20.00%	630V
C704	1-135-362-31	ELECT	1500UF	20%	16V
C705	1-135-362-31	ELECT	1500UF	20%	16V
C706	1-104-760-11	CERAMIC CHIP	0.047UF	10.00%	50V
C707	1-107-824-11	CERAMIC	220PF	5.00%	1KV
C708	1-163-037-11	CERAMIC CHIP	0.022UF	10.00%	50V
C709	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C710	1-104-760-11	CERAMIC CHIP	0.047UF	10.00%	50V
C711	1-126-968-11	ELECT	100UF	20.00%	50V
C712	1-163-007-11	CERAMIC CHIP	680PF	10.00%	50V
C713	1-126-967-11	ELECT	47UF	20.00%	50V
C716	1-128-949-31	ELECT	470UF	20%	16V
C717	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C719	1-125-991-11	ELECT	180UF	20%	450V
C721	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C722	1-126-193-11	ELECT CHIP	1UF	20.00%	50V
C723	⚠1-117-699-41	CERAMIC	0.001UF		250V
C724	⚠1-113-924-91	CERAMIC	0.0047UF	20.00%	250V
C726	1-128-949-31	ELECT	470UF	20%	16V
C727	⚠1-104-705-51	MYLAR	0.1UF	20.00%	250V
C728	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C729	⚠1-117-699-41	CERAMIC	0.001UF		250V
C730	⚠1-113-924-91	CERAMIC	0.0047UF	20.00%	250V
C732	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C735	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C736	1-126-603-11	ELECT CHIP	4.7UF	20.00%	35V
C737	1-128-949-31	ELECT	470UF	20%	16V
C738	1-128-949-31	ELECT	470UF	20%	16V
C739	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C740	1-113-987-11	TANTAL. CHIP	4.7UF	20.00%	25V
C741	1-126-935-11	ELECT	470UF	20.00%	6.3V
C742	1-126-935-11	ELECT	470UF	20.00%	6.3V
C743	1-126-935-11	ELECT	470UF	20.00%	16V
C770	1-126-960-11	ELECT	1UF	20.00%	50V
C771	1-126-960-11	ELECT	1UF	20.00%	50V
C772	1-126-933-11	ELECT	100UF	20.00%	16V
C790	1-126-960-11	ELECT	1UF	20.00%	50V
C791	1-126-960-11	ELECT	1UF	20.00%	50V
C792	1-126-960-11	ELECT	1UF	20.00%	50V
C793	1-162-927-11	CERAMIC CHIP	100PF	5.00%	50V
C794	1-162-927-11	CERAMIC CHIP	100PF	5.00%	50V
C795	1-162-927-11	CERAMIC CHIP	100PF	5.00%	50V
C796	1-162-927-11	CERAMIC CHIP	100PF	5.00%	50V
C797	1-164-156-11	CERAMIC CHIP	0.1UF		25V
C798	1-126-933-11	ELECT	100UF	20.00%	16V

REF.NO.	PART NO.	DESCRIPTION	REMARK
		<CONNECTOR>	
CN701	*1-691-591-11	PIN, CONNECTOR (1.5MM) (SMD)8P	
CN702	*1-766-376-11	PIN, CONNECTOR (1.5MM)(SMD) 9P	
CN703	*1-691-960-11	PIN, CONNECTOR (PC BOARD) 3P	
CN704	*1-691-960-21	PIN, CONNECTOR (PC BOARD) 3P	
CN705	1-573-290-21	PIN, CONNECTOR (1.5MM) (SMD)4P	
CN706	1-566-822-21	JACK	
		<DIODE>	
D701	⚠8-719-077-76	DIODE D2SB60A-F04	
D702	8-719-510-41	DIODE D10SC9M	
D703	8-719-018-82	DIODE RGP02-20EL-6394	
D704	8-719-911-19	DIODE 1SS119-25	
D705	8-719-063-73	DIODE D1NL20U-TR	
D706	8-719-200-82	DIODE 11ES2	
D707	8-719-106-53	ZENER DIODE RD10M-B2	
D708	8-719-976-96	ZENER DIODE DTE4.7C	
D709	8-719-046-85	DIODE MA2S728	
D710	8-719-046-85	DIODE MA2S728	
D711	8-719-074-74	DIODE MA3XD15001S0	
D712	8-719-074-74	DIODE MA3XD15001S0	
D767	8-719-421-59	DIODE MA3130WA-TX	
D768	8-719-421-59	DIODE MA3130WA-TX	
		<TERMINAL>	
ET701	*1-537-738-21	TERMINAL, EARTH	
ET702	*1-537-738-21	TERMINAL, EARTH	
		<FERRITE BEAD>	
FB750	1-469-136-21	FERRITE 0UH	
FB751	1-469-136-21	FERRITE 0UH	
		<FUSE>	
F701	⚠1-576-230-11	FUSE (H.B.C) (3.15A/250V)	
FH701	1-533-223-11	HOLDER, FUSE	
FH702	1-533-223-11	HOLDER, FUSE	
		<IC>	
IC701	8-759-594-75	IC TEA1504/N2	
IC702	8-759-198-31	IC uPC1093J-1-T	
IC704	8-759-652-21	IC MMDF6N03HDR2	
IC706	8-759-651-71	IC MAX1631EAI-TG068	
IC707	8-759-652-21	IC MMDF6N03HDR2	
IC790	8-759-510-71	IC BA10358F-E2	
		<COIL>	
L701	1-412-534-31	INDUCTOR 56UH	
L702	1-412-532-11	INDUCTOR 39UH	
L703	1-408-611-31	INDUCTOR 47UH	
L704	1-406-663-21	INDUCTOR 47UH	

The components identified by mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

REF.NO.	PART NO.	DESCRIPTION			REMARK
L705	1-406-663-21	INDUCTOR 47UH			
L706	1-406-663-21	INDUCTOR 47UH			
L707	1-406-661-11	INDUCTOR 22UH			
		<PHOTO COUPLER>			
PH701	8-749-010-64	PHOTO COUPLER PC123F2			
		<IC LINK>			
PS701	⚠1-533-595-31	LINK, IC			
PS702	⚠1-533-593-31	LINK, IC			
PS791	1-469-136-21	FERRITE	0UH		
		<TRANSISTOR>			
Q701	8-729-926-79	TRANSISTOR IRFIBC40			
Q770	8-729-230-49	TRANSISTOR 2SC2712-YG			
Q771	8-729-230-49	TRANSISTOR 2SC2712-YG			
		<RESISTOR>			
R701	⚠1-219-754-91	CARBON	680K	5%	1/2W
R702	1-215-929-11	METAL OXIDE	100K	5%	3W
R703	1-216-073-00	RES-CHIP	10K	5%	1/10W
R704	1-219-776-11	CARBON	2.2M	10%	1/2W
R705	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W
R706	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R707	1-216-073-00	RES-CHIP	10K	5%	1/10W
R708	1-216-073-00	RES-CHIP	10K	5%	1/10W
R709	1-216-093-91	RES-CHIP	68K	5%	1/10W
R710	1-216-295-91	SHORT	0		
R711	1-215-887-00	METAL OXIDE	150	5%	2W
R712	1-215-887-00	METAL OXIDE	150	5%	2W
R713	1-219-776-11	CARBON	2.2M	10%	1/2W
R714	1-216-049-91	RES-CHIP	1K	5%	1/10W
R716	1-216-635-11	METAL CHIP	220	0.50%	1/10W
R717	1-217-151-00	METAL	0.22	10%	2W
R718	1-216-109-00	RES-CHIP	330K	5%	1/10W
R719	1-260-306-51	CARBON	15	5%	1/2W
R721	1-216-001-00	RES-CHIP	10	5%	1/10W
R722	1-216-049-91	RES-CHIP	1K	5%	1/10W
R723	1-216-658-11	METAL CHIP	2K	0.50%	1/10W
R724	1-216-049-91	RES-CHIP	1K	5%	1/10W
R725	1-208-816-11	METAL CHIP	27K	0.50%	1/10W
R726	1-216-101-00	RES-CHIP	150K	5%	1/10W
R727	1-216-033-00	RES-CHIP	220	5%	1/10W
R728	⚠1-220-778-21	FUSIBLE	0.1	10%	1/2W
R730	1-243-290-91	METAL CHIP	0.068	1%	1/2W
R731	1-240-581-11	CEMENTED	3.9	5%	10W
R732	1-216-797-11	RES-CHIP	10	5%	1/16W
R733	1-243-290-91	METAL CHIP	0.068	1%	1/2W
R735	1-216-041-00	RES-CHIP	470	5%	1/10W
R736	1-218-727-11	METAL CHIP	30K	0.50%	1/16W
R737	1-218-726-11	METAL CHIP	27K	0.50%	1/16W
R770	1-216-699-11	RES-CHIP	100K	5%	1/10W
R771	1-216-699-11	RES-CHIP	100K	5%	1/10W
R772	1-216-699-11	RES-CHIP	100K	5%	1/10W
R773	1-216-699-11	RES-CHIP	100K	5%	1/10W
R774	1-216-651-11	RES-CHIP	1K	5%	1/10W
R775	1-216-651-11	RES-CHIP	1K	5%	1/10W
R776	1-218-478-11	RES-CHIP	330	5%	1/4W
R777	1-218-478-11	RES-CHIP	330	5%	1/4W
R778	1-216-659-11	RES-CHIP	2.2K	5%	1/10W
R779	1-216-659-11	RES-CHIP	2.2K	5%	1/10W
R780	1-218-476-11	RES-CHIP	180	5%	1/4W
R781	1-216-295-91	SHORT	0		
R782	1-216-295-91	SHORT	0		
R783	1-216-295-91	SHORT	0		
R784	1-216-295-91	SHORT	0		
R785	1-216-295-91	SHORT	0		
R786	1-218-476-11	RES-CHIP	180	5%	1/4W
R788	1-216-627-11	RES-CHIP	100	5%	1/10W
R789	1-216-627-11	RES-CHIP	100	5%	1/10W
R790	1-240-091-21	RES-CHIP	47K	5%	1/10W
R791	1-240-091-21	RES-CHIP	47K	5%	1/10W
R792	1-240-091-21	RES-CHIP	47K	5%	1/10W
R793	1-240-091-21	RES-CHIP	47K	5%	1/10W
R794	1-240-091-21	RES-CHIP	47K	5%	1/10W
R795	1-240-091-21	RES-CHIP	47K	5%	1/10W
R796	1-240-091-21	RES-CHIP	47K	5%	1/10W
R797	1-240-091-21	RES-CHIP	47K	5%	1/10W
R798	1-240-093-21	RES-CHIP	68K	5%	1/10W
R799	1-240-091-21	RES-CHIP	47K	5%	1/10W
		<TRANSFORMER>			
T701	⚠1-419-621-11	INDUCTOR 7.4MH			
T702	1-435-291-21	TRANSFORMER, CONVERTER (SRT)			
		<VARISTOR>			
VDR701	⚠1-801-073-11	VARISTOR ERZV14D471			

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